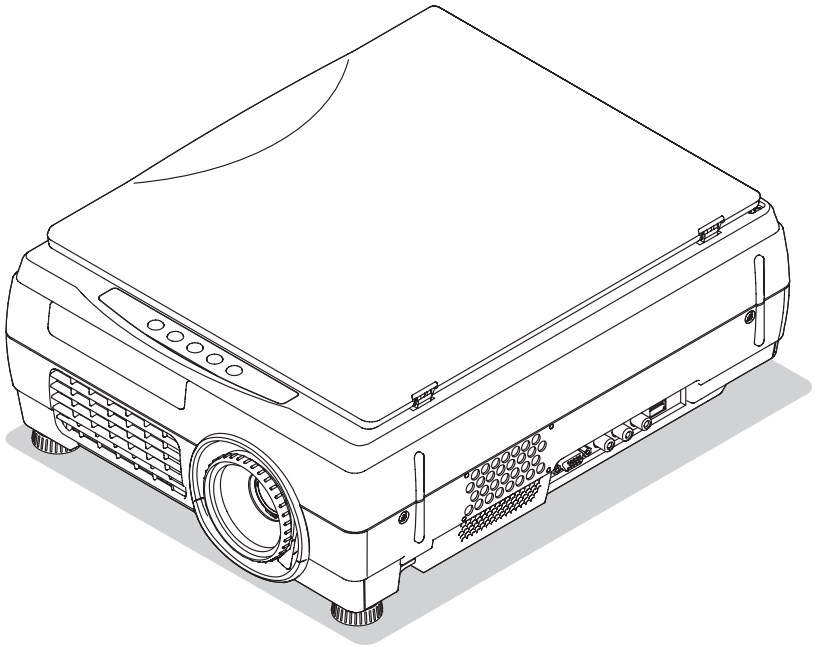
A Proposal for New Presentations

Avio

Intelligent Projector

User's Manual

iP-02UE



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Warning
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Thank you for your purchase of an AVIO product.
Please read this manual carefully in order to use the projector properly.
After reading this, please keep it in a safe place.

Features of the iP-02

- **Versatile projector offers 4 roles in one unit. A projector for the multimedia age.**
  1. Projection of documents, catalogs, and other printed materials. Printed materials can be projected directly without the creation of OHP film.
  2. Projection of personal computer screen images
     Detailed presentations can be made using a personal computer.
  3. The video images of video tape decks, DVDs and other equipment can be projected. This permits the creation of presentations that are visually appealing.
  4. Use of a USB memory stick permits presentations without the use of a personal computer (PC).
- **Easily understood, simple operation for everyone**
  One button operation simply switches the projection of printed material, personal computer screen, and video image.
- **Designed for a conservation of resources which offers excellent cost performance**
  The creation of OHP film is not required. This allows a reduction of wasteful time and costs.
- **Expressive color pictures**
  Contains a high resolution, 3.15 million pixel single-board color CMOS camera. Faithfully and clearly reproduces in full color with 16.77 million colors including the fine intermediate shades of a color manuscript.
- **Enlarged display without changing the screen size**
  When projecting documents having small characters that were not created for presentations, such as catalogs and word-processed documents, the iP-02 can enlarge the document without changing the screen size to provide an easy-to-view display.
- **Provided with display functions for compressed or enlarged PC screen**
  Screens of resolution more than 1024 × 768 dots are displayed compressed to 1024 × 768 dots without any loss in character quality. Also, screens with low resolutions, such as 640 × 480, are displayed over the full screen, without changing the screen size.
  * See Page E-21 of this manual for information about supported resolutions.
- **Environmentally friendly eco mode**
  The eco mode for reducing power consumption is set as the default. (Page E-43)
  In addition to reducing power consumption, the eco mode also offers the advantages that it reduces noise from the cooling fan and extends the lamp's service life.

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Warnings and Safety Precautions

Warning Symbols
To alert the user to important safety precautions, the following symbols are used in this manual and on the product. Make sure you understand what these symbols mean before operating the projector.

⚠ **WARNING**	Death or serious injury may result if this warning is ignored.
⚠ **CAUTION**	Injury or damage to the equipment may result if this warning is ignored.
NOTE	This indicates an item that you should take care of when handling your projector.
⚠	This symbol alerts the user to high voltage that could cause electric shock.

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Safety Precautions

⚠ WARNING

- **Concerning the use of this projector:**
  - It is anticipated that this projector will be used by adults. Especially when children younger than junior high school students will be using this projector, we ask that an adult always attend the use of the projector for safety.
- **If a fault occurs:**
  - If you detect smoke, or a strange smell or sound, immediately disconnect the power cable.
    It is dangerous to continue using the projector after a fault occurs. Return the projector to the dealer where it was purchased for repair.
- **Avoid placing the projector near dangerous substances.**
  - Make sure that no metallic or flammable material can get into the projector through the air vents.
  - Do not place any objects containing water on top of or next to the projector.
- **If foreign matter gets inside the projector:**
  - If foreign matter such as water or metal gets inside, immediately disconnect the power cable.
    It is dangerous to continue using the projector when foreign matter gets inside. Return the projector to the dealer where it was purchased for servicing.
- **Do not remove the cabinet.**
  - Do not remove the cabinet. There are high-voltage components inside and touching these parts could cause electric shock, or damage the equipment.
- **Handle the power cable safely.**
  - Do not place any heavy objects on top of the power cable.
    Damage to the power cable can cause wire breakage, fire, or electric shock.
  - Do not pull the power cable when disconnecting the power plug.
    Pulling the cable may break the wires or cause fire or electric shock. Always hold the plug itself when pulling it out of the power outlet.

  If the power cord is damaged, purchase a new one from a distributor.
  - Do not use damaged power cords (cords with exposed core wires, broken wires, etc.). Using damaged power cords could result in fire or electric shock. Purchase a new power cord from a distributor.
- **Do not peep into the lens.**
  - Do not peer into the lens when projecting images. The strong light could lead to vision impairment, etc.
- **Do not touch the air vents or lamp cover**
  - While the lamp is lit and directly after it is turned off, the ventilation slots and surrounding area are hot. To avoid burns and injury from the heat, keep your hands, face, etc., away from ventilation slots and surrounding area at these times.
  - The area around the projector's exhaust outlet gets very hot. Do not place the projector on tables, desk mats, etc., that are vulnerable to heat. The table may be discolored, the desk mat warped, etc.
- **Do not block the lens front**
  - Do not block the lens front during operation.
    The powerful rays passing through the lens may cause fire or burns if you put anything in front of the lens or block the lens with your hand during operation.
- **Do not use any voltages other than specified.**
  - Do not use any voltages other than specified. Doing so could cause fire or electric shock.
- **Do not beat the glass surface**
  - Do not beat the glass surface over the scanner. Doing so may break the glass, resulting in injury.
- **Do not get on the unit. Do not put a heavy matter on it.**
  - To avoid damage and malfunction, do not place your weight on the projector or place heavy objects (2 kg or more) on top. Also, do not places objects on the projector in such a way that part of the weight is concentrated on the glass surface. The glass surface could break, resulting in injury.
- **Do not bring your face close to the ventilation slots**
  - Do not bring your face close to the ventilation slots because should the lamp explode, particles and mercury contained in the gas could enter your eyes or mouth. This could cause injury.
    (If foreign matter has entered an eye, please receive a medical examination at a nearby hospital.)
- **Do not put the projector in unstable places.**
  - Do not put the projector in unstable places such as on unstable desks or slopes.
    Doing so could cause the projector to drop or turn over, resulting in injury.

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- **Do not turn on the light of the projector unless the projector is installed horizontally**
  - Do not turn on the light of the projector when the projector is oriented other than horizontally: up side down, facing up, on its side, or facing down. Doing so may cause a fire or lamp explosion.

Warning

Please check the rating of the power cable.
Prior to using a power cable, please make sure that the cable is fully compliant with the power ratings and the type of the plug in the area and, if not, purchase proper power cable for the area. Do not use the cables for 120V rating to 220V power source.
Using improper cable may cause fire or electrical shock to human body.

⚠ CAUTION

- **Installation**
  - Avoid installing the projector in places where it may be exposed to:
  - On tables, etc., that are vulnerable to heat.
  - Strong vibrations
  - Soot or steam
  - Direct sunlight or near a heater (35°C/95°F or higher)
  - High humidity or dust
  - Cold places (5°C/41°F or less)
  - Strong magnetic or electric field generated from a nearby appliance
  - Wobbling on an unstable surface
  - Depending on the installation environment (e.g., beside a wall or when affected by air conditioning air currents), the hot air expelled from the front may cause heat haze and the projection image may waver.
- **Do not block the air vents.**
  - Do not block the air vents with cloth or an object.
    When you put anything around the unit, be sure to ensure a space of 10 cm/4 inches or more between the unit and the air vent. Be sure to prevent paper or cloth from blocking the air vent at the bottom of the unit. If blocked, the internal temperature may increase, resulting in malfunctions.
- **Do not bump the projector.**
  - Avoid bumping the projector when moving or handling. Shocks can cause damage.
- **Care of the projector**
  - To prevent risk of accidents, always disconnect the power plug before cleaning the projector.
  - Clean the lens surface with a commercial blower or lens cleaning paper.
    Wiping with tissue paper or a handkerchief can damage the lens.
  - To clean the cabinet, operation panel, and glass surface, wipe gently with a soft cloth. For particularly dirty spots, soak the cloth in a neutral detergent mixed in water, wring out well and wipe off the dirt, then use a dry cloth to wipe dry.
  - Do not wipe the projector with any volatile solvent such as benzine or thinner.
    The surface may change in quality, and the markings may peel off.
    If using an impregnated cloth, follow the instructions of the cloth.
- **Avoid scratching the glass surface.**
  - Take care not to scratch the glass surface of the scanner with hard or pointed objects.
    Scratches on the glass may distort the projected image.
- **Battery**
  - When inserting battery in the remote control, note the polarity (plus and minus signs) and insert correctly as indicated. Inserting a battery in a wrong direction can cause rupture or leakage, and could result in fire and injury or soil the surrounding area.
  - Do not use coin battery other than the type specified for the equipment. Incorrect battery usage could result in rupture or leakage, and could cause fire and injury.
  - Do not heat, break open, burn, or immerse the battery. Battery rupture or leakage could cause fire and injury.
  - Perchlorate Material-special handling may apply.
    See www.dtsc.ca.gov/hazardouswaste/perchlorate/index.cfm.

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- **Dew condensation**
  - Abruptly moving the unit to a place where there is a great temperature difference causes dew condensation on the main unit.
    Projection under a dew condensed state causes a failure.
- **Servicing and cleaning**
  - Have the internal components cleaned by a retailer about once a year. There is a risk of fire or faulty operation if the inside of the projector gets dusty and is not cleaned for a long time. For best results, the projector should be serviced before the wet season brings damp conditions. Cleaning charges are at the discretion of the retailer.
- **If not using the projector for a long period:**
  - If you do not plan to use the projector for a long time, disconnect the power cable for safety.
- **Disposal**
  - Follow the regulations in place in your community when disposing of the projector and lamp unit.
- **Transporting the projector**
  - Use the special packaging when transporting the projector. The manufacturer cannot accept responsibility in the event of damage or accident if other packaging is used.
  - Use the special packaging no more than two times. Repeated usage reduces the shock absorbency of the packaging and can lead to damage or accident.
  - Transport the projector after the tilt stand is completely stored.
  - Contact the retailer if you require new packaging.
- **Lamp implosion**
  - A DC type Super High pressure lamp is used in this projector and it is rare for the lamp to explode during use. The unit is also designed to forcibly turn off the lamp because there is a high possibility that the lamp will break if it is used beyond the lamp usage of 2000 hours (Refer to pages E-46 and E-47).

  Note the following things
  - A loud sound could be produced if the lamp explodes. The loud sound is due to the very high pressure inside the high-pressure mercury lamp.
    At this time, there is a risk that fine particles of glass and other material that result from the lamp explosion may be released to the outside from the ventilation slots.
    During use, do not bring your face close to the vicinity of the ventilation slots (at the projector front, side, and rear).
  - When a lamp explodes, the gas from within the lamp is released to the outside from the ventilation slots and resembles a white smoke; however, this is not produced from heat generation or a fire. Note that mercury is contained in the gas inside the lamp, and because of this, when a lamp has exploded, appropriate action should be taken including the opening of windows and doors. Also, in the event that someone has inhaled the gas, please contact a doctor immediately.

  Remedy
  - A product containing a lamp that has exploded during use may have lamp fragments scattered within the product; therefore, without replacing the lamp please request repair service from the store of purchase, the dealer, or elsewhere.
    Lamp replacement must not be undertaken by the customer when a lamp has exploded. Doing so will result in injury from the lamp fragments, etc.
- **Replacing the lamp**
  - Be sure to turn the lamp off and disconnect the power cable when the fan stops, and wait an hour or more before replacing the lamp.
    Replacing the lamp during operation or just after the power is turned off may cause burns due to heat.
    Refer to “Replacement of the Lamp Unit” on page E-46 for the procedure.
  - In regard to the disposal of the lamp unit, follow the disposal method of your municipality for the same type of waste as common household fluorescent tubes.
- **Cleaning the ventilation inlets and outlets**
  - To clean the ventilation inlets and outlets, unplug the power plug from the power outlet after the cooling fan stops.
    Removal while the cooling fan is rotating may cause injury.
    Please read “Cleaning the Air Intake/Ventilation Slots” on Page E-49 for information about the cleaning steps for the ventilation inlets and outlets.
- **Avoiding malfunctions and accidents**
  - Adjust the Adjustable feet to keep the projector horizontally.
    Using the projector in a tilted status may cause injury if it rolls over. Refer to
    “Adjusting the Tilt” on page E-24 for the adjusting procedure.

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- **Do not do the followings**
  - Do not put anything heavy on the projector.
  - Do not step on the projector, rack, or stand. Do not hold or hang on the projector.
    Doing so could cause the projector to roll over or break, resulting in injury.
    Especially be careful if small children are near.
  - Do not use the rack unless the casters are locked when placing the projector on a rack with casters.
    Doing so may cause the projector to move or roll over, resulting in injury.
  - Do not turn the lamp on/off within one minute after it is turned off/on. Extremely high voltage is generated in the lamp just after it is turned on. Turning the lamp on/off too frequently could cause the lamp to deteriorate or break, resulting in malfunctions of the projector.
  - Do not project an image with the lens cap attached.
  - Do not use with the air filter removed. Doing so could cause damage or malfunction.
  - Do not lift the projector by grasping the focus adjustment ring. Doing so will cause a fault or damage.
  - After disconnecting the power cable from the projector, allow an interval of at least 5 seconds before inserting it again.
- **Moving the projector**

  The unit is meant to be used in a stationary position.
  - Be sure careful of the glass surface at moving the projector while holding the handles.
  - If the document cover is not inserted enough, it may get loose and fall off while you carry it.
  - Avoid swinging it around or treating it roughly.
- **Care of the power cable and plug**
  - Do not put the power cable near a heater.
    Doing so could cause the sheath of the cable to melt down, resulting in fire or electric shock.
  - Do not connect or disconnect the power cable with wet hands. Doing so could cause electric shock.

  Only use the included power cord.
  - Only use the power cord included with the projector. Using other power cords could result in fire or electric shock.
  - Be sure to establish a ground connection. The ground connection must be made before plugging the power cable into the outlet.
    Connect or insert the ground wire to a ground terminal only; do not connect it elsewhere.
  - Be sure to pull out the power cable and disconnect any cable connections between units and release the anti-theft lock before moving the projector.
    Moving the projector with cables connected may cause fire or electric shock if the cables are damaged.
- **DO NOT REMOVE ANY SCREWS except the lamp cover screw and two lamp unit screws. Otherwise you could receive an electric shock.**
- **About the projection lamp and other optical parts**

  Optical parts such as the light source lamp, fan, and color wheel are parts that require periodic replacement (i.e., periodic replacement parts).
  When the projector is used continuously for long periods (of 5 or more hours daily), the replacement of those parts may even become necessary in less than one year of use.
  Note also that use of the projector in places where there is tobacco smoke or a lot of dust may shorten the replacement cycle of the periodic replacement parts. Please inquire with the dealer for details.
- **Keep your face away from the exhaust vents.**
  - If the lamp is broken, dust may enter your eyes or mouth. Be sure to keep your face away from the exhaust vents. Otherwise, it may result injury.
    (If foreign matters enter the eyes, consult an ophthalmologist.)

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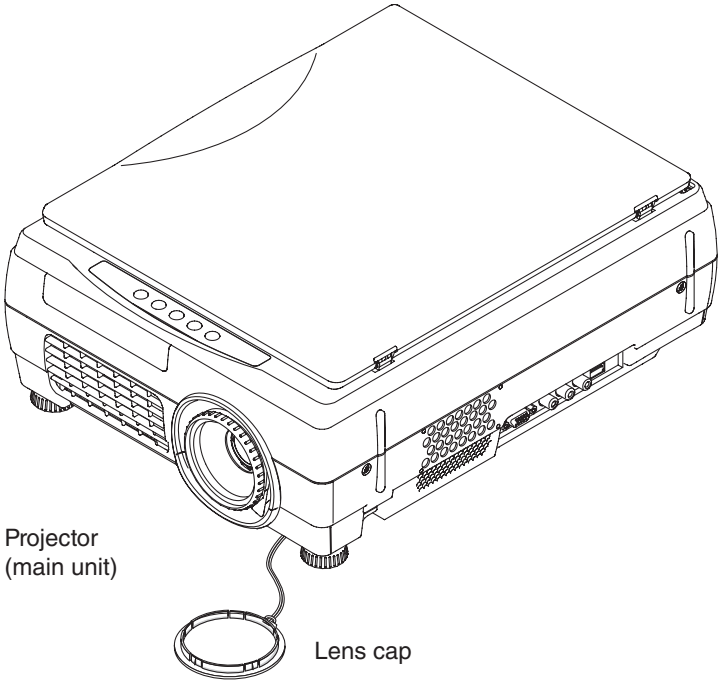
A Check of the Supplied Items and the Names of the Parts

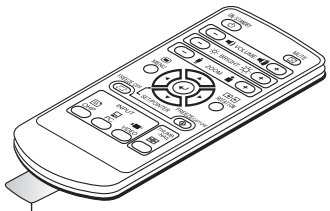
Supplied Parts Check

Please check that the supplied parts are included.



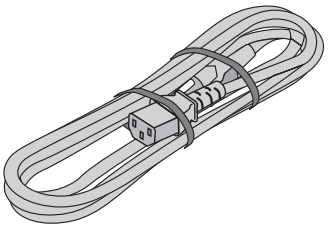
Projector
(main unit)

Lens cap

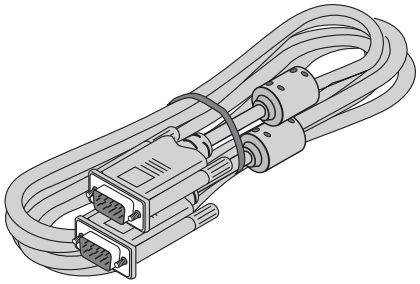


Pull out the sheet before use.

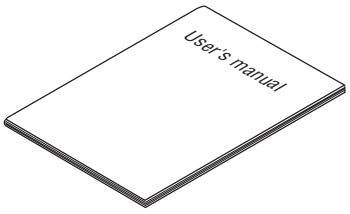
Remote control
Coin-type lithium battery: CR2025
(Inside the remote control)



Power cable (3 m)



PC connection cable (2 m)



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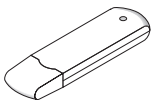

USB Memory

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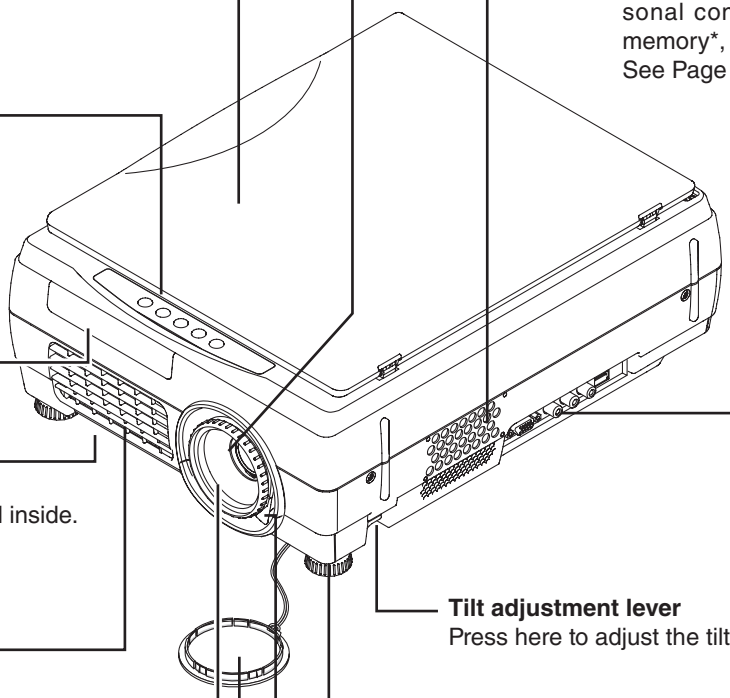
Names and Functions of the Parts (Projector)



Air intake
Air is drawn in from the side.

Focus adjustment ring
Turn this to adjust the focus.
See Page E-24.

Document cover
The document or printed material to be read is placed under this cover.
See Page E-33.

Input connector panel
Included are connectors for personal computer, video, and USB memory*, etc.
See Page E-12.

Operation panel
The buttons used for regular operation are located here. See Page E-13.

Remote control IR sensor

Lamp unit cover (Underneath projector)
The projection lamp unit is located inside.
See Page E-46.

Exhaust vents
Air is discharged from here.

Tilt adjustment lever
Press here to adjust the tilt foot. See Page E-24.

Projection lens
The image is projected from here.
* Be sure to remove the lens cap before projecting.

Lens cap

Tilt foot
This foot is used to adjust the vertical angle of the projection as well as the left-right balance. Turning it to the left extends it and turning it to the right shortens it. See Page E-24.

Zoom lever
Turn this to adjust the screen size. See Page E-24.

⚠ **CAUTION**	• During unit operation, do not obstruct the front of the lens. During operation, strong light through the lens is projected. Obstruct the front of the lens causes fire or burn. • During projection, be sure to remove the lens cap. Negligence to observe it may deform the lens cap. • When a lamp explodes, it is possible that particles of glass and other material may be released outside from the ventilation slots; therefore, do not bring your face close to the ventilation slots, or the air intake.

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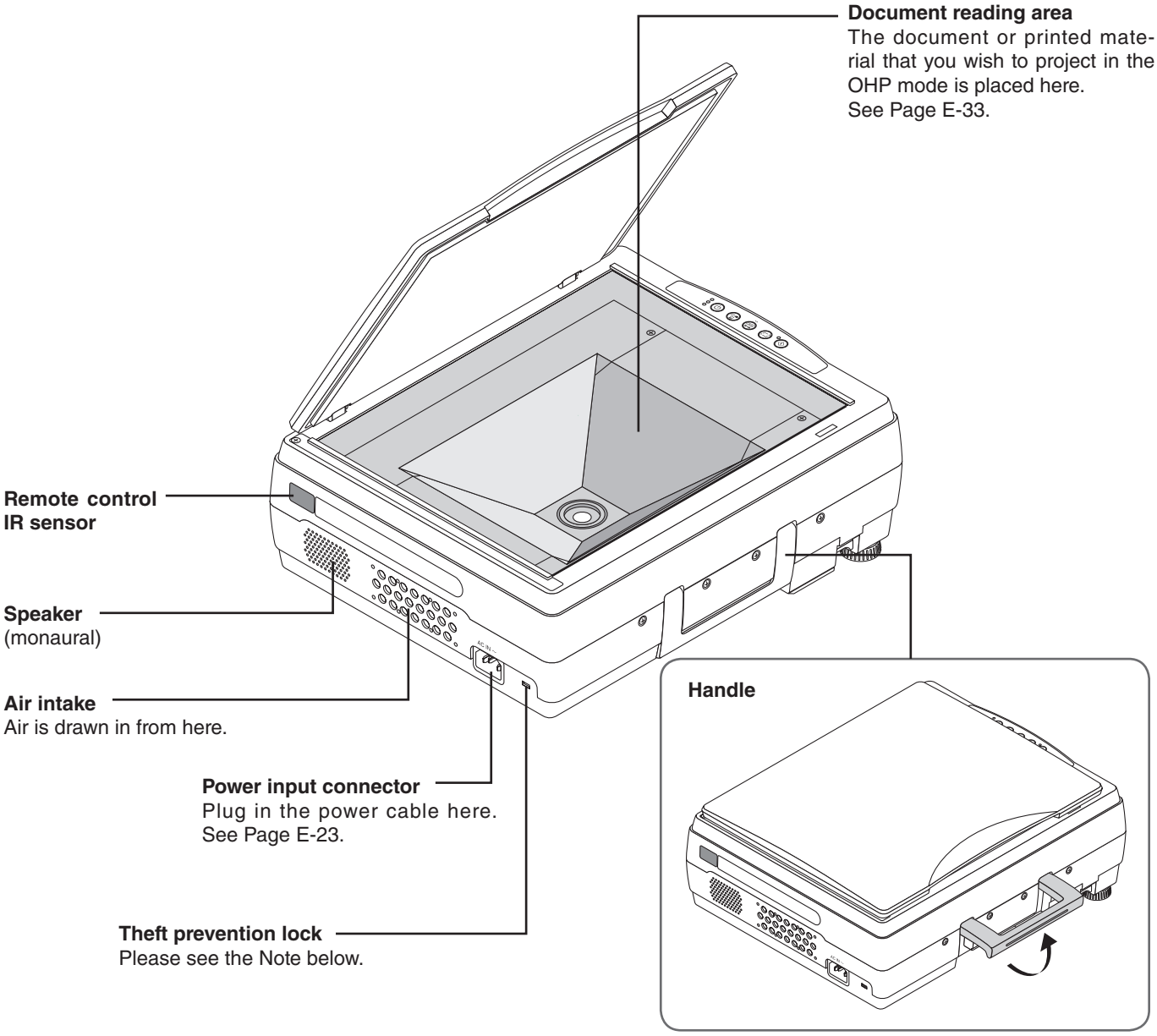
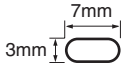

Document reading area
The document or printed material that you wish to project in the OHP mode is placed here.
See Page E-33.
Remote control IR sensor
Speaker
(monaural)
Air intake
Air is drawn in from here.
Power input connector
Plug in the power cable here.
See Page E-23.
Theft prevention lock
Please see the Note below.
Handle

NOTE
About the anti-theft lock

The anti-theft lock is compatible with Kensington security cable lock. Contact the following for more information about the products.



Kensington Computer Products Group
Phone: (650) 572-2700
Fax: (650) 267-2800
URL: http://www.kensington.com

⚠ CAUTION	• When a lamp explodes, it is possible that particles of glass and other material may be released outside from the ventilation slots; therefore, do not bring your face close to the ventilation slots, or the air intake.

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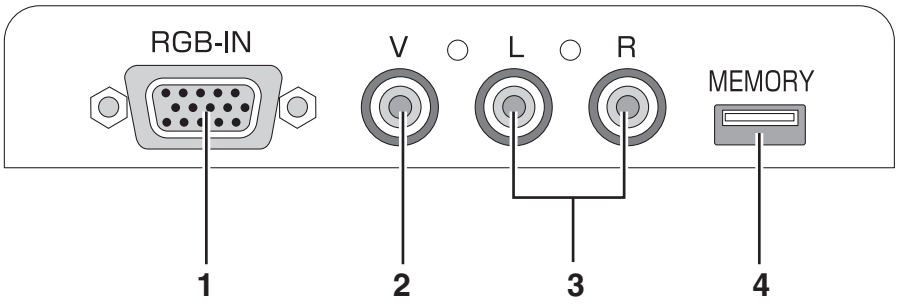
Names and Functions of the Parts (Input Connectors)



1. **Computer/video (D terminal output) video input connector**
   Use this input terminal for connection to a computer's analog RGB input connector or a video deck's D connector output using an RGB conversion cable (sold separately).
   See pages E-18 and 22.

2. **Video input connector**
   This input connector is for use with the video (NTSC / PAL / SECAM). See Page E-22.

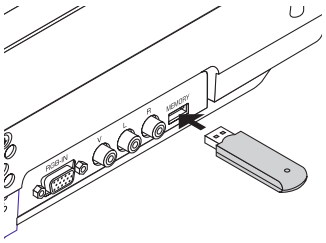
3. **PC/VIDEO audio input jack**
   This is the audio input jack for PC/Video. (Stereo is supported)
   To output the audio of a PC, use a (commercially available) stereo mini plug to RCA stereo conversion cable.
   See Pages E-16 and 22

   NOTE:
   Left and right channel sounds will be output from a monaural speaker.
   Sound will be output when audio is input regardless of the PC/VIDEO mode setting. (Sound will not be output in the OHP mode.)

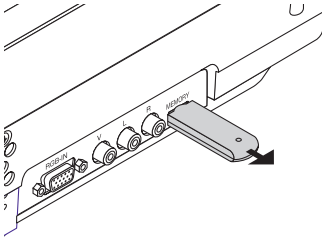
4. **USB connector**
   This connector is for the insertion of a USB memory stick.

USB memory stick insertion and removal

Inserting a USB memory stick
Insert straight and all the way into the USB connector.
* Insert a USB memory stick only; nothing else.



Removing a USB memory stick
* Pull out the USB memory stick after changing the input to a setting other than OHP.



NOTE
Our optional USB memory stick is guaranteed to operate.
The other USB memory sticks are not guaranteed to operate.

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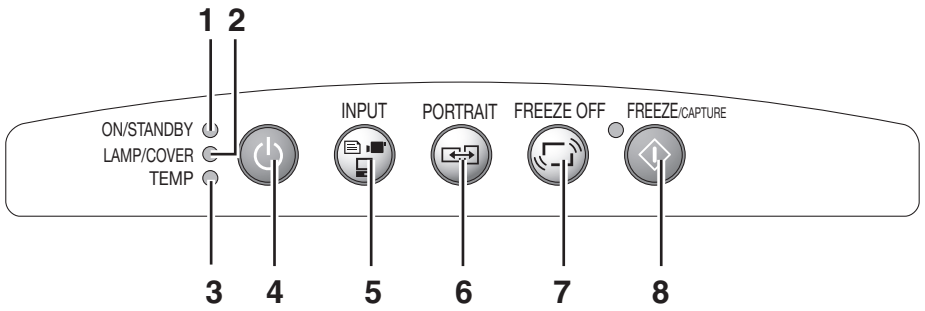
Names and Functions of the Parts (Operation Panel)



1. ON/STANDBY LED
Lit red during standby and lit green when the projection lamp is on. See Page E-23.

2. LAMP/COVER LED
Lit green during projection. Lit red when the air filter or lamp unit cover is not in place.
- At the time of the projection lamp lighting operation, the LED flashes for about 6 seconds and then lights green.
- At the time of a projection lamp lighting failure, the LED flashes green. (The flashing interval when the projection lamp is off will be longer than when the LED flashes at other times.)
- When the projection lamp is off, the LED flashes green for 60 seconds and then goes off.
- When the projection lamp has been used in excess of 1,900 hours, the LED flashes red; when use exceeds 2,000 hours the LED is lit a steady red.

See Page E-44.

3. TEMP LED
When the internal temperature has risen excessively, the LED flashes red for 10 seconds, then is lit a steady red. See Page E-44.

LED List

LED State			Significance	
ON/ STANDBY	LAMP/ COVER	TEMP		
Off	Off	Off	AC power OFF	Normal condition
Red	Off	Off	Standby	
Green	Flashing green	Off	Standby to start of projection	
			End of projection to standby	
Green	Green	Off	Projecting	
Red	Red	Off	Lamp cover open	Power has been switched OFF because of the alarm
			Lamp burned out	
Red	Flashing red	Off	Lamp usage exceeds 2,000 hours	
Red	Orange	Off	Internal problem	
Red	Off	Red	Temperature fault	
			Fan fault	
Green	Flashing red	Off	Lamp usage exceeds 1,900 hours	Alarm sounding
Green	Green	Flashing red	Abnormal temperature warning	

4. ON/STANDBY Button
Switches the power of the projector on or off (standby mode).
* Only this button is effective when the projection lamp is off.
See Page E-23.

5. INPUT Button
Press this to switch the input.
The input switches as follows: OHP → PC → VIDEO or OHP → VIDEO (D4) → VIDEO.
See page E-25.

6. PORTRAIT Button
When OHP is selected: Changes the orientation of the projection image to 0° and to 90°. (The projected image can be rotated 360° in 90° steps from the menu.)
See Page E-25.

7. FREEZE OFF Button
Cancels the still image mode.
Cancels the still image mode.
This is used when checking the projection screen while moving the document.
See Page E-29.

8. FREEZE/CAPTURE Button
Makes the projection screen image into a still image.
When OHP is selected, the still image is stored in the internal memory or in the USB memory as a history image.
See Page E-28.

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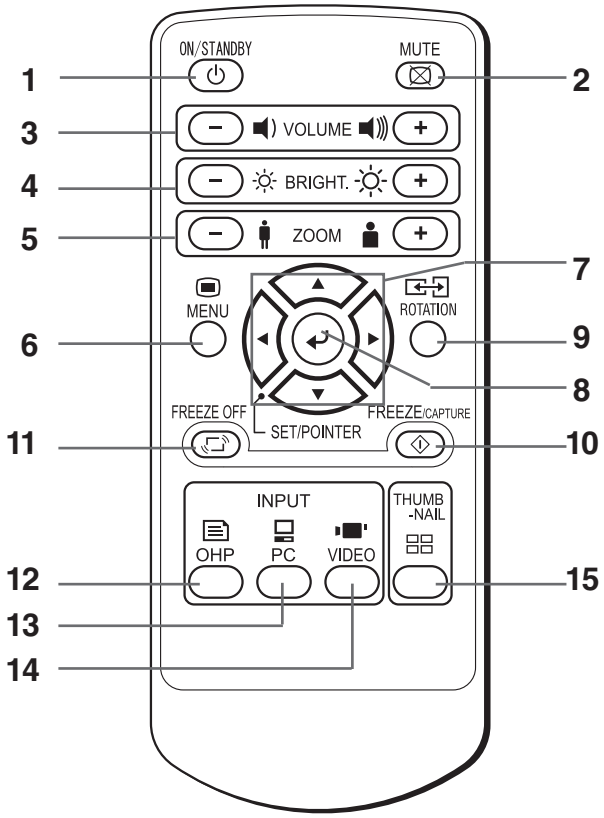
Names and Functions of the Parts (Remote Control)



1. **ON/STANDBY Button**
   Switches the power of the projector on or off (standby mode).
   - Only this button is effective when the projection lamp is off.

   See Page E-23.

2. **MUTE Button**
   Temporarily blanks the projection screen without switching off the lamp. One more press causes the screen to return immediately.
   See Page E-32.

3. **VOLUME Buttons**
   These buttons adjust the volume when the PC or video is selected.
   In addition, during the display of one history image, VOLUME + button advances the page, and the VOLUME – button moves back one page.
   See Page E-31.

4. **BRIGHTNESS Buttons**
   These buttons adjust the brightness of the projection screen.
   See Page E-27.

5. **ZOOM Buttons**
   These buttons adjust the magnification of the projection screen.
   See Page E-26.

6. **MENU Button**
   Switches on or off the display of the menu screen.
   See Page E-35.

7. **SCROLL Buttons**
   Sets the selection of the item or the adjustment value at the menu screen. Moves the zoom position during a zoom display. Moves the pointer when the pointer is being displayed.
   See Pages E-26, 27, 29 and 32.

8. **SET/POINTER Button**
   During menu display, this button advances the menu to the next level. This button finalizes the setting at the time of item selection. See Page E-34. This button displays a pointer when the menu screen is not displayed. Press this button one more time to make the pointer disappear.

9. **ROTATION Button**
   When OHP is selected: Switches the orientation of the projected image between 0° and 90°. (The projected image can be rotated 360° in 90° steps from the menu.)
   See page E-25.

10. **FREEZE/CAPTURE Button**
    Makes the projection screen image into a still image.
    When OHP is selected, the still image is stored in the internal memory or in the USB memory as a history image.
    See Page E-28.

11. **FREEZE OFF Button**
    Cancels the still image mode.
    This is used when checking the projection screen while moving the document.
    See Page E-29.

12. **OHP Button**
    Switches the projector to OHP input. See Page E-25.

13. **PC Button**
    Switches the projector to PC input. See Page E-25.

14. **VIDEO Button**
    Switches the projector to video input. See Page E-25.

15. **THUMBNAIL Button**
    Displays captured still images as thumbnails.
    See Page E-29.

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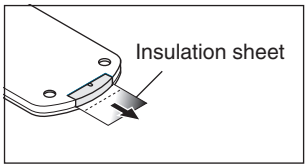
Operation of the Remote Control

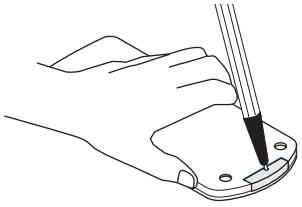
- Please use the remote control within a range of about 7 m from the remote control IR sensor of the projector (located at both the front and rear) and within an angle of 10 degrees to the left and 10 degrees to the right. Note that this distance may be shorter depending on battery consumption.
- The remote control will not function when there is an obstacle located between the remote control and the remote control IR sensor of the projector.

Battery Replacement

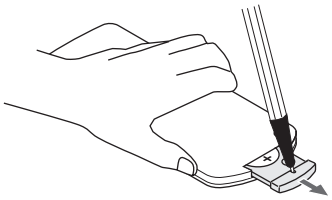


Before Using the Projector
An insulation sheet has been inserted for protection during transportation prior to shipping. Please pull out and remove the sheet before use.

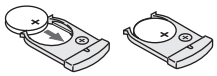
1 **Firmly hold the remote control with your hand and insert the tip of a ballpoint pen or some other pointed object into the hole on the rear side.**
Note that there is the risk of scratching the case when using a pointed item such as an awl.



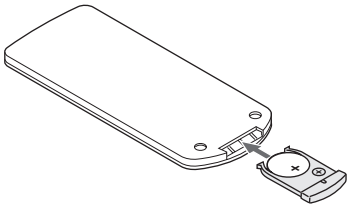
2 **Slide the battery holder toward you by pressing from above with the pointed item, then remove the holder.**



3 **Insert the new battery (CR2025) with the + side facing up, as illustrated on the inside of the case.**



4 **Return the battery holder to its original state.**



⚠ **CAUTION**	**Handling of the Remote Control** • Do not subject the remote control to a strong shock such as dropping it from a table. Doing so could damage it and render it inoperable. • Do not expose it to water or other liquid. If the remote control becomes wet, wipe it dry immediately. • Avoid exposure to heat and steam. Remove the coin-type lithium battery when the remote control will not be used for an extended period. • Do not disassemble or heat the coin-type lithium battery, nor throw it into a fire. • Please follow the disposal method of your region in disposing of the used coin-type lithium battery. • The remote control may fail to operate or performance may worsen when it is used near an inverter type fluorescent lamp. • Please store the coin-type lithium battery in a place that is out of the reach of children. If the battery is swallowed, promptly seek the care of a doctor. • Please handle the remote control with care, since there are some operations available only with it. • When it is time to replace the battery, please purchase a CR2025 coin-type lithium battery. The use of batteries having a different shape such as the CR2032 may make removal difficult.

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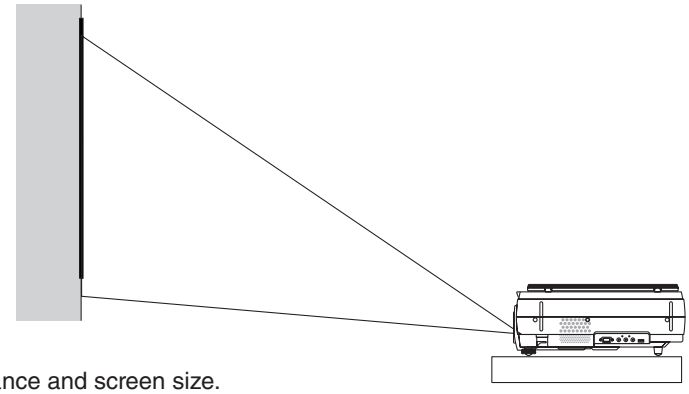
Procedure Up to Projection

1 Consideration of placement location and screen size

Determine the screen and projector setup location.
Set the projector on a strong and stable, level platform.



See Page E-17 for information about the projection distance and screen size.

2 Connections with input equipment

Connect your personal computer/video equipment.

Connections with the Personal Computer → See Page E-18
Connections with the Video Equipment → See Page E-22

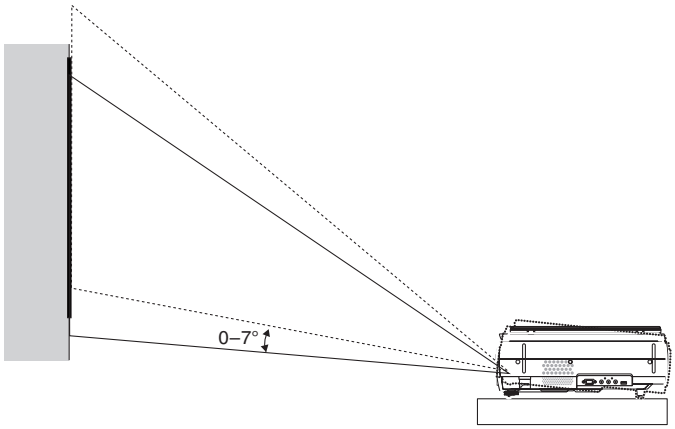
3 Connect the power cable and switch on the power

Switch On the Power → See Page E-23
Switch Off the Power → See Page E-23

4 Switch on the power of the personal computer or video equipment

5 Properly adjust the projection image to the screen

→ See Page E-17



Perform the tilt adjustment of the projector to provide the desired projection height.

The tilt adjustment allows the position of the projection image to be raised and lowered. The adjustment angle is from 0 degrees to 7 degrees.

Tilt adjustment → See Page E-24

6 Select the input equipment

→ See Page E-25

7 Adjust the image or video

Adjust the image to provide the optimum condition, as required.

→ See Page E-42 - E-43

NOTE

While AVIO conducts strict quality inspections, with DLP® type projectors, in some rare cases there may be black spots or bright spots within the pixels. Please note that this is not a malfunction.

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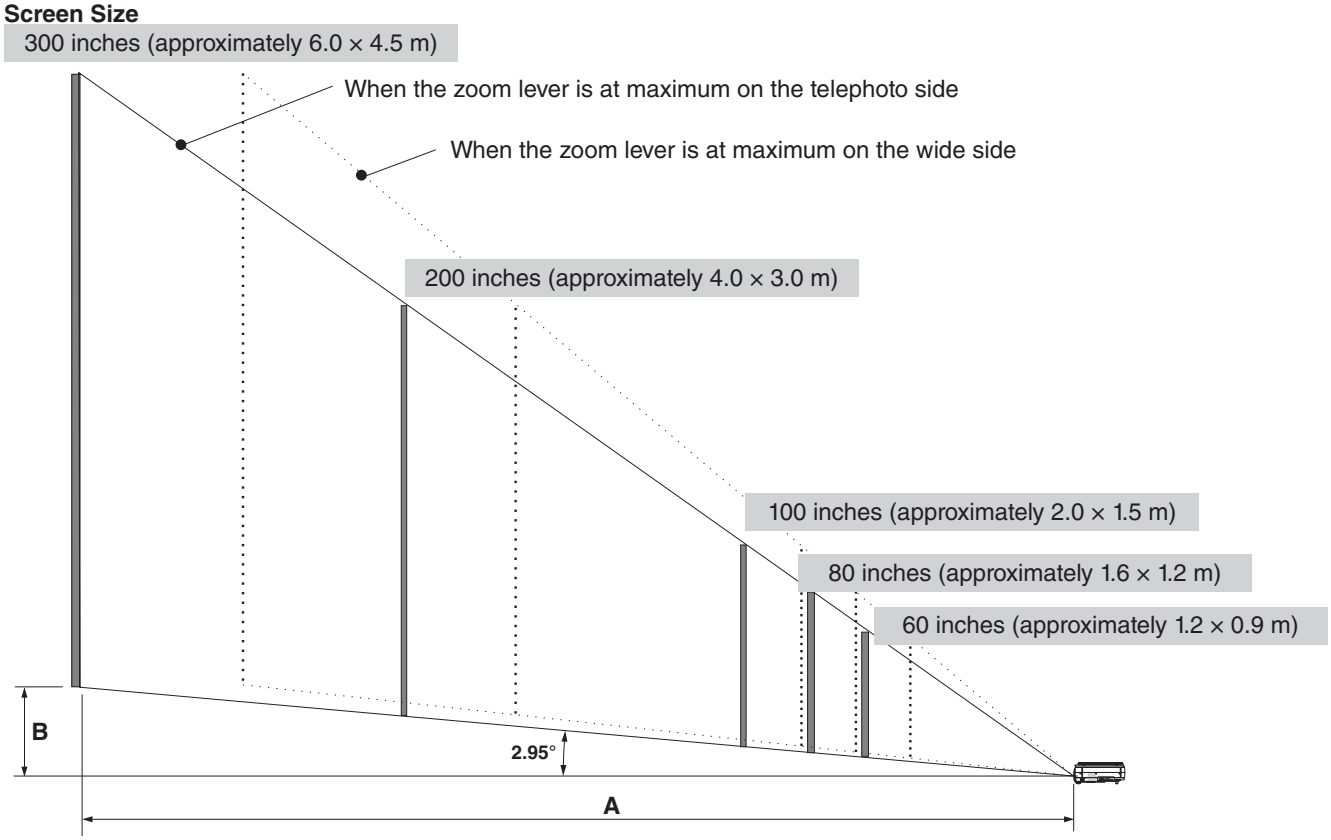
Projection Distance and Screen Size

Please use the following diagrams to determine the screen display size and the type of screen required for any given projector location.
Projection distances that will be in focus will be 1.30 m (4.27 feet) to 10.96 m (35.96 feet) from the front of the lens. Please arrange the setup within this range.

Screen Size


300 inches (approximately 6.0 × 4.5 m)
When the zoom lever is at maximum on the telephoto side
When the zoom lever is at maximum on the wide side
200 inches (approximately 4.0 × 3.0 m)
100 inches (approximately 2.0 × 1.5 m)
80 inches (approximately 1.6 × 1.2 m)
60 inches (approximately 1.2 × 0.9 m)
B
2.95°
A

Projection Distance Table

Screen size (inches) opposite angle	Screen Size	A: Projection distance (m)		B: Height of projection bottom edge (mm)	Height (mm)
		Wide	Telephoto		
300	6.0 × 4.5m	10.96	–	565.0	4572.0
200	4.0 × 3.0m	7.32	6.40	376.6	3048.0
100	2.0 × 1.5m	3.66	4.27	188.3	1524.0
80	1.6 × 1.2m	2.92	3.42	169.5	1219.0
60	1.2 × 0.9m	2.20	2.57	113.0	914.0
40		1.46	1.71	75.3	609.6

Wide: The size of the projection image becomes maximum with the projection image size adjustment using the zoom lens

Tele: The size of the projection image becomes minimum with the projection image size adjustment using the zoom lens

⚠ CAUTION

Setup Location

- Do not place the projector in locations that will reach high temperatures or low temperatures.
  Operation ambient temperature: 5°C (41°F) to 35°C (95°F)
- Set the screen so that it is not exposed to direct sunlight or the light of direct illumination. When light hits the screen, the screen show a white cast and will be difficult to watch.
  In a bright room, the curtains should be drawn or blinds closed and the area around the screen kept dark.
- Do not set up the projector in locations exposed to dampness, dust, greasy smoke or tobacco smoke. Doing so will result in the adhesion of dirt to lenses, mirrors, and other optical parts and cause a degradation of image quality.
- Do not place the projector in a location where the ventilation vents will be blocked or in closed areas having poor ventilation. Doing so will cause the temperature to rise and could cause a fire or accident. (The exhaust vents are at the front of the projector and the air intake vents are located at the side.)
- Do not place the projector at a location where it may be propped up or swayed.
- During unit operation, do not obstruct the front of the lens. During operation, strong light is projected through the lens and if the front of the lens is obstructed by a matter or hand, it may cause fire or burn.
- During projection, be sure to remove the lens cap. The lens cap may be deformed.
- Please do not set the projector on a table or desk mat made of a heat-sensitive material. Table may be discolored or desk mat may be deformed.

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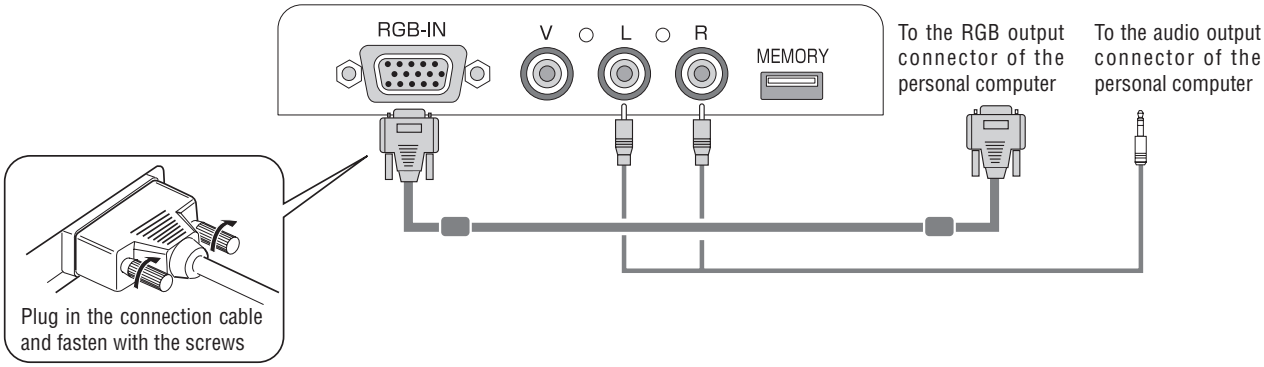
Connections with the Personal Computer

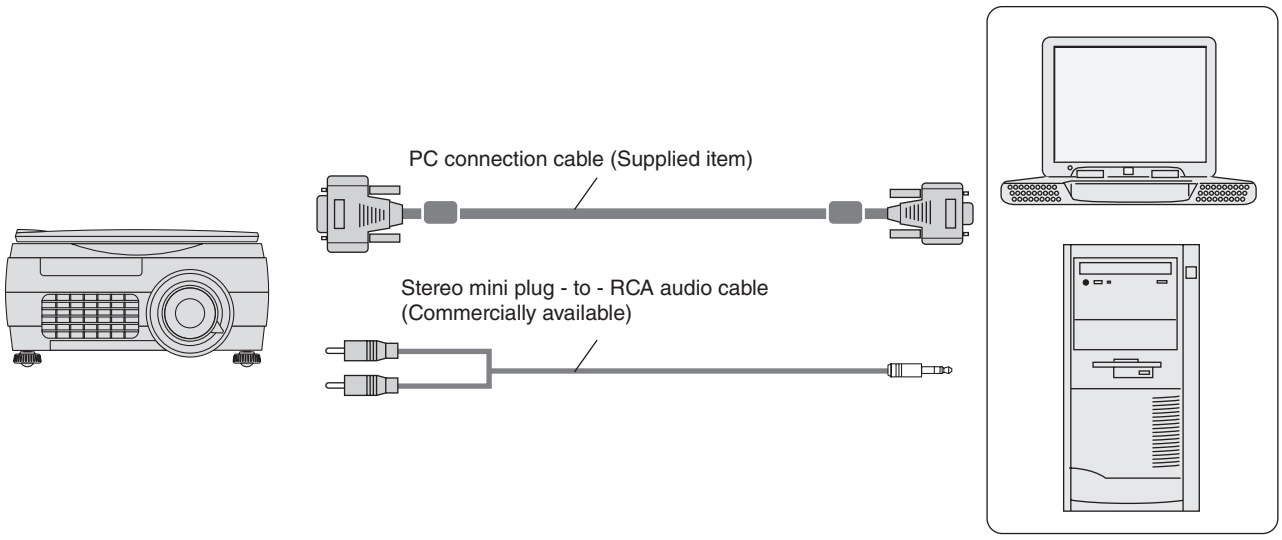
⚠ CAUTION	**Connection Precautions** • To protect this projector and the equipment to be connected, switch off the power of each unit before making connections. • Please read the various equipment instruction manuals for information about the connection of the equipment and the method of use. • When connection is made with a notebook computer and the image is displayed on the LCD screen of the notebook computer, a proper display might not be obtained on projection screen. Switching off the display of the notebook computer will result in a proper display. The method of switching off the display of the notebook computer will differ depending on the PC manufacturer. Please read the instruction manual of the notebook computer for details. • Connection might not be possibly depending on the model and settings of the personal computer. Please contact your dealer of purchase for further information. • The image of the PC cannot be projected while the USB cable is connected. Connect the PC connection cable.

Basic Connections


RGB-IN
V
L
R
MEMORY
To the RGB output connector of the personal computer
To the audio output connector of the personal computer
Plug in the connection cable and fasten with the screws

NOTE:
- Input Connectors → See Page E-10.

Connections with Personal Computers



NOTE:
- After connecting the PC connection cable, set the external output and the computer's screen display settings on the computer.
- When the settings of the external output have not been made, "No signal being input" will be displayed.
- The lamp turns off if no signal is being input and no operation has been performed for over 15 minutes. (This only functions when the auto power off mode is set to "ON". See page E-43.)

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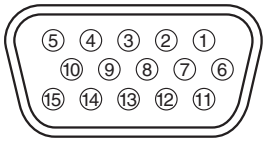
Connecting Macintosh Computers

- When the monitor output is set to the VGA port (mini D-SUB 15-pin), mount the PC connection cable included with the main unit.
- An optional Apple video adapter cable is required when the monitor output is a video port or DVI port.

Personal Computer Input Connector

Personal Computer Input Connector

The personal computer input connector uses a 15-pin mini D-SUB type connector.
The pins and their corresponding signal inputs are described below.



① RED VIDEO	⑥ GND	⑪ NC
② GREEN VIDEO	⑦ GND	⑫ SDA (DDC2B)
③ BLUE VIDEO	⑧ GND	⑬ H.SYNC
④ GND	⑨ NC	⑭ V.SYNC
⑤ NC	⑩ GND	⑮ SCL (DDC2B)

NOTE: The RGB (15-pin) input connector of the projector is of the analog type. This cannot be connected with a digital output type of personal computer.

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When the Image of the Personal Computer Screen Is Not Projected

Please check the matters described below when the image of the personal computer is not projected or when there is projection but the image is not correct.

● The image is not projected

When the external output signal from the personal computer is not input to the iP-02, “No computer signal being input” is displayed on the display screen of the iP-02. Should this occur, please check the following matters.

1 **Try restarting the personal computer.**

When the iP-02 is connected after the personal computer has been started, the connection of the iP-02 might not be recognized by the personal computer. When the iP-02 has not been recognized, the external output signal from the personal computer will not be output and there will not be an image to project.

2 **Check the functions of the personal computer.**

Depending on the notebook computer, some computers will require an operation to output a signal from the external output connector. If this operation is not performed, the external output signal from the notebook computer will not be output.
Please see the instruction manual of the notebook computer you are using and perform the operation that will output the signal from the external output connector.

Correspondence List for Connection Problems with the Personal

Manufacturer	External Output Switching Method	Manufacturer	External Output Switching Method
IBM	Fn+f7	DELL	Fn+f8
NEC	Parallel output	Toshiba	Fn+f5
	Switching from the Task Bar	Panasonic	Fn+f3
	Fn+f3	Fujitsu	Fn+f10
HP (Formerly COMPAQ)	Fn+f4	Mitsubishi	Fn+f5
Sharp	Fn+f5	Apple	Check mirroring with System environment setting → Display → Adjustment tab
SONY	Fn+f7		

* This table indicates the results of an independent investigation by us of representative computers made by various manufacturers; it does not include all of the connections.
* Company names and product names mentioned are the trade marks or registered trademarks of the respective companies.

● The screen of the personal computer is correct, but the image is not projected properly

Please check the functions of the personal computer.
Even though the LCD screen of the notebook computer is properly displayed, the projected image might not be projected properly. Due to restrictions of the notebook computer there will rarely be instances in which the setting of a simultaneous display (i.e., simultaneous output of the external output signal while displaying the screen of the personal computer) will result in a signal that greatly deviates from the range supported by the iP-02 and proper projection will not be possible.
Should this occur, a proper image will not be obtained even when adjustments are made with the iP-02.
In some instances, the personal computer screen will be properly projected by the iP-02 when the simultaneous display is cancelled and an operation is performed to output only the external output signal. Please see the instruction manual of the notebook computer you are using for details.

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Table of Supported Input Signals

Signals indicated with a “Yes” are supported. Note that depending on the model of personal computer, please perform the screen adjustment of the “Image adjustment” → “Sync adjustment” menu if flickering or bleeding appear on the projection screen. → See Page E-40

Signal Name	Resolution (Horizontal × Vertical)		Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Supported
NTSC RGB	-	-	15.7	60	No
PAL/SECAM RGB	-	-	15.6	50	No
PC-98 Normal*1	640	400	24.8	56	Yes
PC-98 Hi	640	400	31.5	70	Yes
VGA-GR1	640	480	31.5	60	Yes
VGA-GR2*1	640	400	31.5	70	Yes
VGA-GR3*1	640	350	31.5	70	Yes
VGA-TX1*1	720	350	31.5	70	Yes
VGA-TX2*1	720	400	31.5	70	Yes
640 × 480 72Hz	640	480	37.8	72	Yes
640 × 480 75Hz	640	480	37.5	75	Yes
640 × 480 85Hz	640	480	43.2	85	Yes
Mac 13" RGB	640	480	35.0	66	Yes
800 × 600 56Hz	800	600	35.1	56	Yes
800 × 600 60Hz	800	600	37.8	60	Yes
800 × 600 72Hz	800	600	48.0	72	Yes
800 × 600 75Hz	800	600	46.8	75	Yes
Mac 16" RGB	832	624	49.7	74	Yes
1024 × 768 43Hz	1024	768	35.5	43	No
1024 × 768 60Hz	1024	768	48.3	60	Yes
1024 × 768 70Hz	1024	768	56.4	70	Yes
1024 × 768 75Hz	1024	768	60.0	75	Yes
1024 × 768 85Hz	1024	768	68.7	85	Yes
MAC 19" 1024 × 768	1024	768	60.2	75	Yes
1280 × 768 60Hz	1280	768	47.7	60	Yes
MAC 21" 1152 × 864	1152	870	68.7	75	Yes
1280 × 800 60Hz	1280	800	49.7	60	Yes
1280 × 960 60Hz	1280	960	60.0	60	Yes
1280 × 960 85Hz	1280	960	85.9	85	No
1280 × 1024 60Hz	1280	1024	64.0	60	Yes
1280 × 1024 75Hz	1280	1024	80.0	75	Yes
1280 × 1024 85Hz	1280	1024	91.1	85	Yes
1600 × 1200 60Hz	1600	1200	75.0	60	Yes
1600 × 1200 65Hz	1600	1200	81.3	65	No
1600 × 1200 70Hz	1600	1200	87.5	70	No
1600 × 1200 75Hz	1600	1200	93.8	75	No
1600 × 1200 85Hz	1600	1200	106.3	85	No

- When the resolution of the input signal is lower than 1024 × 768 dots, the image is enlarged and displayed; if the resolution is higher than 1024 × 768 dots, the image is reduced and displayed.
- The signals above marked with (*) may not display properly when full keystone correction is applied. When using these signals and applying keystone correction, please check the image while making the setting so that the image is not adversely affected.
- The signal types of D1 to D4 video (D1:525i (480i), D2-525p (480p), D3:1125i (1080i), D4: 750p (720p) are supported.
- With resolutions of over SXGA 1280 × 1024, image zooming is limited. Also, such images cannot be set to the still image mode.

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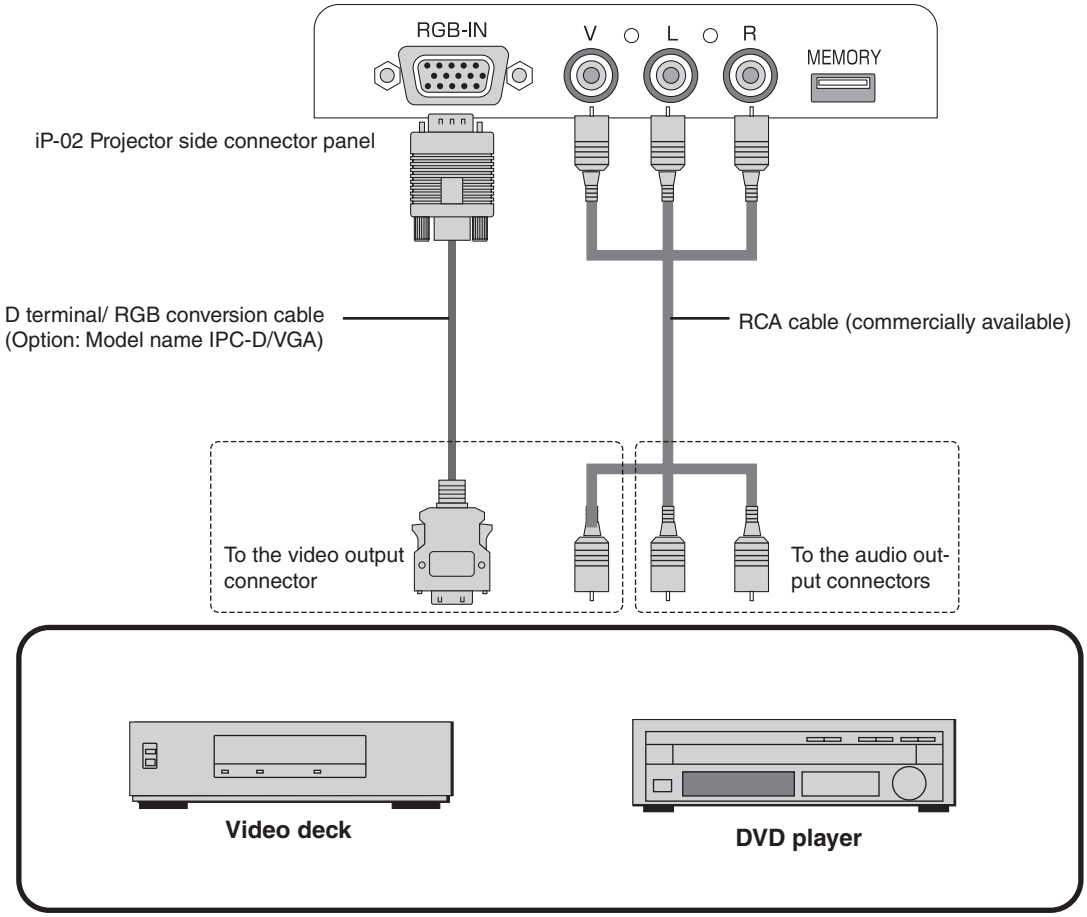
Connections with Video Equipment

The video of a video tape deck or DVD player is projected onto a large screen.



NOTE:

- When a video signal have a lot of noise, the image may be displayed in monochrome. Should this occur, make a setting with the “Video select” menu to suit the input signal.
- The lamp turns off if no signal is being input and no operation has been performed for over 15 minutes. (This only functions when the auto power off mode is set to “ON”. See page E-43.)

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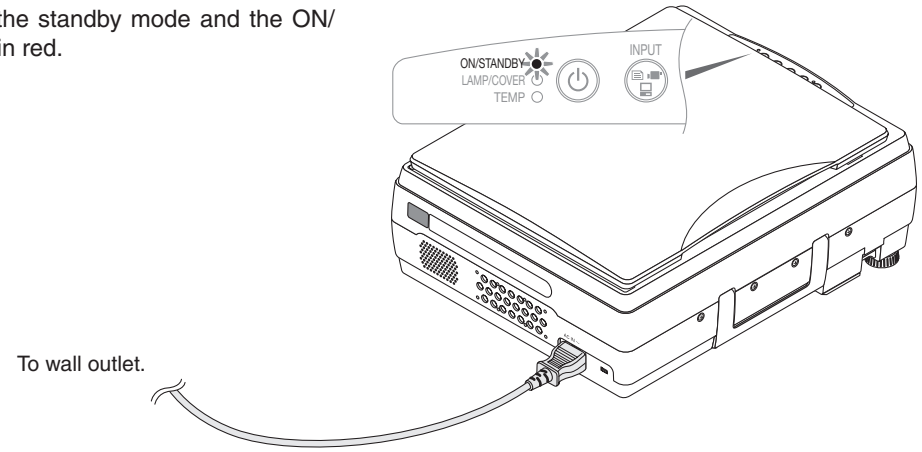
Connection of the Power Cable and On/Off Switching

Switch On the Power

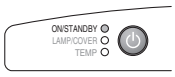
1 **Connect the power cable**

The projector will enter the standby mode and the ON/STANDBY LED will light in red.



2 **Press the ON/STADNBY button (⏻)**

Operation with the Projector



Operation with the Remote Control

The fan will turn, the lamp will light, and the ON/STANDBY LED will light in green. The LAMP/COVER LED will light in green.

- If the LED lights in red after the ON/STADNBY button is pressed, projector trouble is indicated.
  → See Page E-50
- Check that the lens cap has been removed before pressing the ON/STADNBY button.

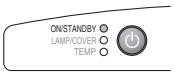
The projector is now able to make a projection.

Switch Off the Power

1 **Press the ON/STANDBY button (⏻)**

"Press ON/STADNBY button again to turn off" will appear on the projection screen.

Operation with the Projector



Operation with the Remote Control

2 **Press the ON/STANDBY button (⏻) one more time.**

The lamp will go off.

- The LAMP/COVER LED flashes green, then turns off once cooling is completed.

The ON/STANDBY LED lights in resistance.

- When the lamp is off, pressing the ON/STANDBY button while the LAMP/COVER LED is flashing green will not switch the lamp on again.
  To switch the lamp on again, please press the ON/STANDBY button again after the ON/STANDBY LED lights in red.

3 **Disconnecting the Power Cable**

The ON/STANDBY LED on the operation panel will go off.
The power cable can also be disconnected (i.e., direct power off function) when the lamp/cover LED is flashing green.

⚠ **CAUTION**	• Do not disconnect the power cable while the lamp is lit. • After using the USB memory stick, be sure to unplug it and store it; do not leave it inserted. • Disconnect the power plug of the projector from the power outlet when the projector will not be used for a long time. • When you will be reinserting the power plug into the power outlet soon after disconnecting it, allow a fixed interval (of approximately 10 seconds) before inserting it.

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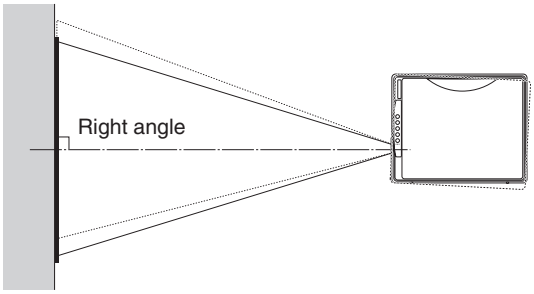
Adjustment of the Projection Image

Adjusting the Projection Image

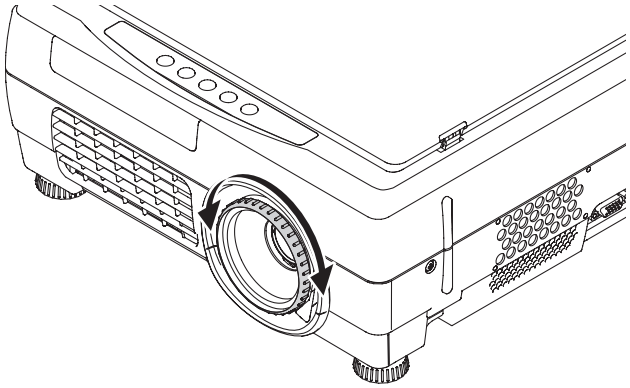
Adjust the projection image to the screen.

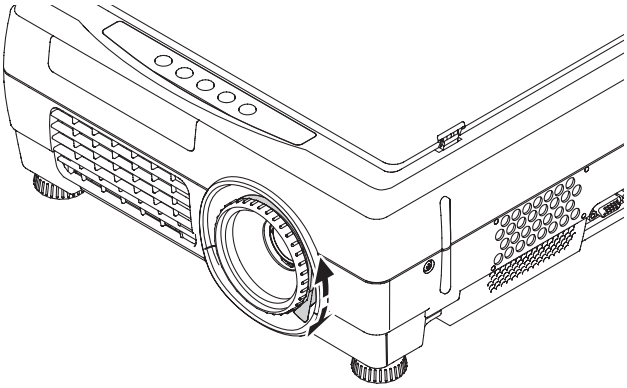
- When the image is shifted to the left or right, move the projector horizontally. (Align the center of the screen with the center of the projector lens.)
- When the image is shifted up or down, use the tilt foot to adjust the projector vertically.
- When the image is slanted, turn the left or right tilt foot to adjust.
- When there is distortion in the shape of a trapezoid, adjust with KEYSTONE of the menu operations. See Page E-42.
  However, when keystone auto adjustment is set to "ON", the image is only adjusted automatically in the vertical direction. It can be adjusted manually in the horizontal direction.



Making Focus/Zoom Adjustments

Turn the focus ring/zoom lever of the projection lens and adjust the projection image.

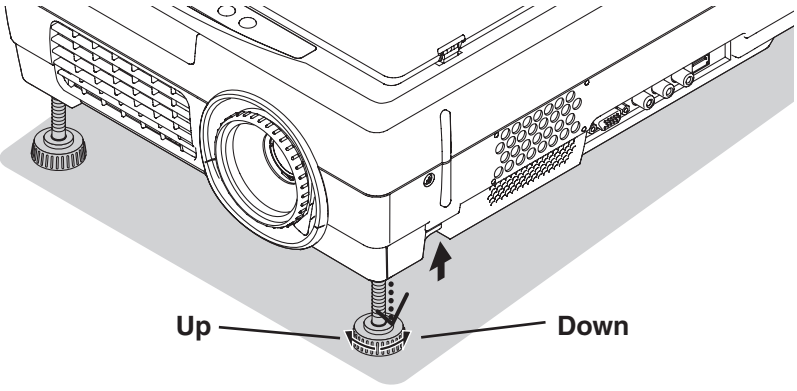




The image size depends on the projected distance. See page E-17.

Adjusting the Tilt (Slant)

Adjustment of the tilt foot allows the position and slant of the projection image to be adjusted.
Press the left-right tilt adjustment lever and raise the front of the projector. Release the lever when the desired height has been reached. Rotating the lowest portion of the tilt foot permits fine adjustments to be made. The tilt foot are lengthened by rotated to the left and shortened by rotated to the right.



⚠ CAUTION	• Do not lengthen the tilt foot on only one side which would place the projector on an extreme slant. Doing so could result in the projector slipping or falling over and could cause an accident or breakdown. • When moving the projector, be sure to return the tilt foot to the original position. • The ventilation holes on the projector's sides and bottom take in cooling air using a strong suction force. If cloth or paper get stuck to them, the internal temperature will rise, leading to accidents or damage. • Depending upon the material of the placement location, the rubber feet may soil on the placement surface.

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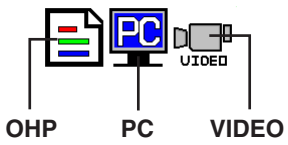
Regular Operation

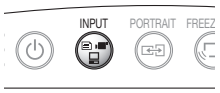
This section describes the use of direct operation using the projector and remote control buttons.
Please see the items on Page E-36 “Method of Menu Operation” and Page E-38 “Menu Description” for information about operation using the menu.

Select the Input

When the projector’s power is turned on, one of the input selection icons ([OHP, PC or VIDEO] or [OHP, VIDEO (Component) or VIDEO]) is displayed.

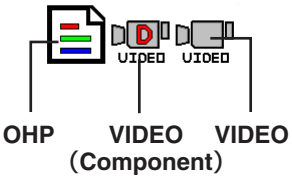
(When the PC input is set to RGB)

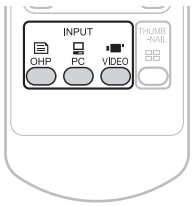




Operation with the Projector
Select the input using the INPUT buttons.
The input switches in the order OHP → PC → VIDEO or OHP → VIDEO (Component) → VIDEO each time the button is pressed.

(When the PC input is set to component)





Operation with the Remote Control
Select the input using the INPUT buttons.

* For instructions on selecting the PC input, see page E-38.

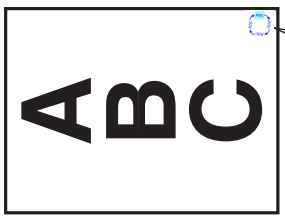
NOTE:
- The input mode at starting time will be the same as it was the last time the projector was switched off.
- When the icon is displayed, either the left or right key permits input switching.

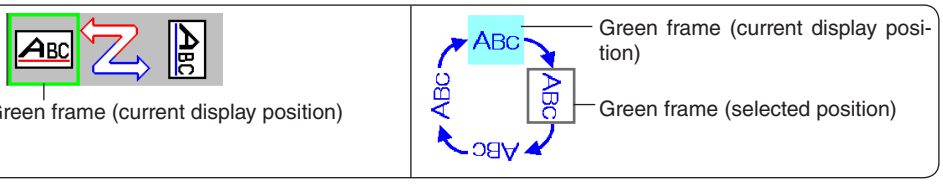
Changing the Orientation of the Projection Image

Effective Only with OHP Input

This changes the orientation of the currently projected image to 0° and to 90°. The changed video is displayed according to the lateral axis of the screen. Also, a mode for rotating the projected image 360° in 90° steps can be selected from the menu screen.

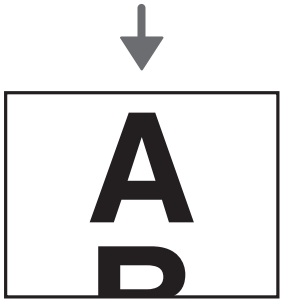
When 90-deg rotation is chosen

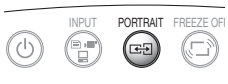




(vertical/horizontal rotation mode)

(360° rotation mode)





Operation with the Projector
Press the PORTRAIT button.

Operation with the Remote Control
Press the ROTATION button.

- When the PORTRAIT or ROTATION button is pressed, the rotation selection icons appear. Select the desired orientation. The icon display turns off when the image switches.

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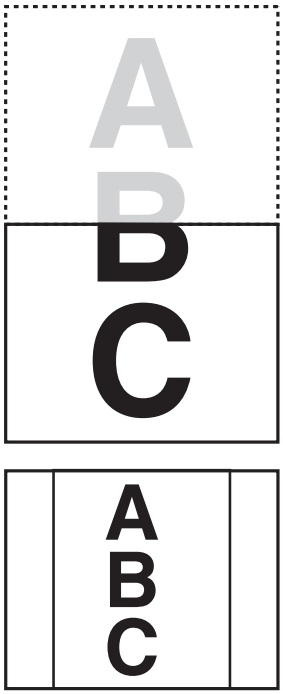
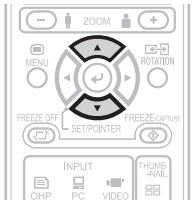
To view the portion that has been cut off



Operation with the Projector
Scrolling is not possible from the main unit's control panel.



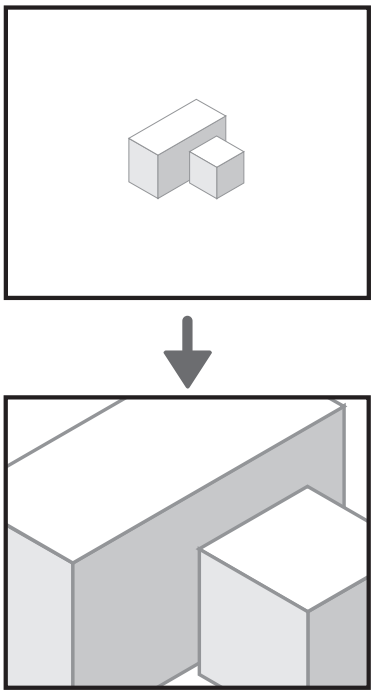
Operation with the Remote Control
Press the SCROLL (▲▼) buttons and scroll the projection image up or down.

- Pressing the ZOOM (–) button permits display of a large portion within the reading range of the vertical display. The undisplayed portion can be displayed with the SCROLL (▲▼) buttons.

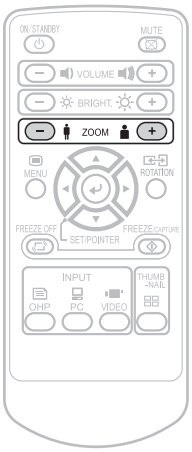
NOTE:
When the orientation of the projection image is changed, even if the zoom function is in use, the display of the switched screen will be adjusted to match the width, the same as with regular changes of orientation.

Enlarging and Reducing the Projection Image

This operation enlarges or reduces the size of projected image.



Operation with the Projector
Enlarging/reducing is not possible from the main unit's control panel.



Operation with the Remote Control
Press one of the zoom buttons.
(+): Enlarge the size of the projected image
(–): Reduce the size of the projected image

NOTE:
With resolutions of over SXGA 1280 × 1024, image zooming is limited. Also, such images cannot be set to the still image mode.

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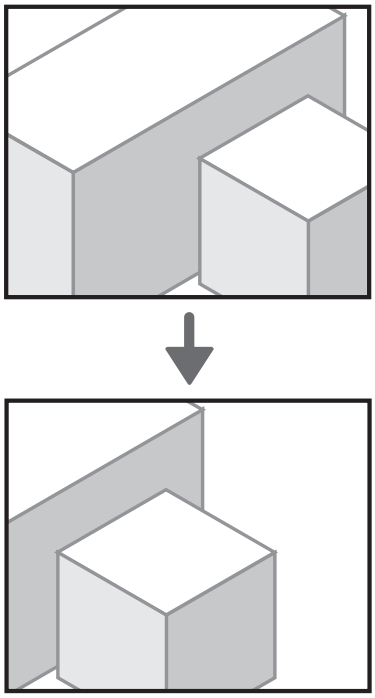
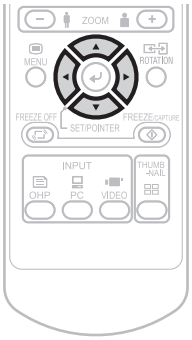
Moving the Screen

Movement is possible in 4 directions (up, down, left, and right).



Operation with the Projector
Scrolling is not possible from the main unit's control panel.

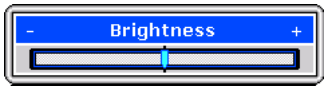


Operation with the Remote Control
Press the SCROLL (▲▼◀▶) buttons.

Adjusting the Brightness

To change the brightness, perform a manual adjustment using the method described below.

Operation with the Projector
The brightness cannot be adjusted from the main unit's control panel.



Brightness adjustment bar

Operation with the Remote Control
Adjust using the BRIGHTNESS ☼ (+)/☼ (–) buttons.
☼ (+): Projection image becomes brighter
☼ (–): Projection image becomes darker

NOTE:
- If no operation is performed for several seconds while the brightness adjustment bar is displayed, the brightness adjustment bar turns off.

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Capturing the Projection Image (Effective Only with OHP Input) / Still Image Display

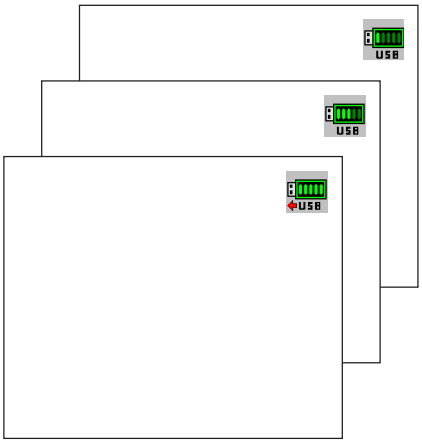
At time of OHP input

When the FREEZE/CAPTURE button is pressed, the OHP document is stored in the internal memory as an OHP history image.
The projected image will become a still display.

Operation with the Projector]
Press the still FREEZE/CAPTURE button.

Operation with the Remote Control
Press the still FREEZE/CAPTURE button.

NOTE:
- With USB memory inputs, images are stored with priority on the USB memory stick.
- When no USB memory stick is inserted, images are stored in the internal memory.
- The operation differs when tandem operation is set to "ON". See page E-43.



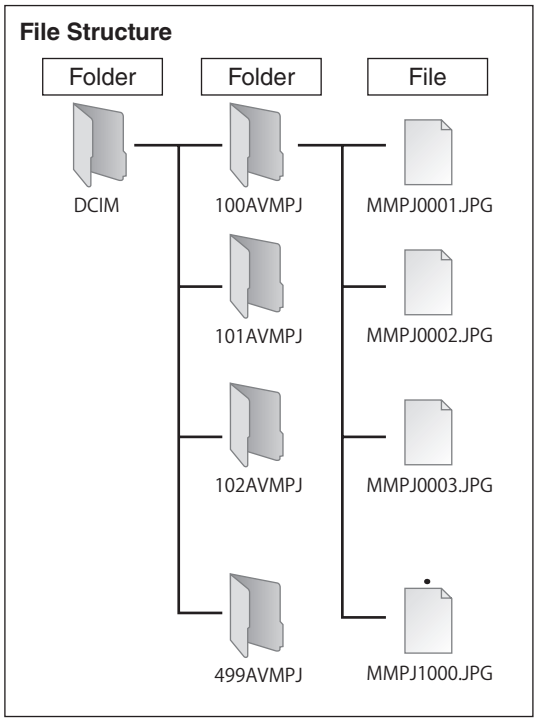
At image capture, the icon is displayed. The icon display differs depending on the memory capacity currently used.

Icon		Memory capacity
USB memory stick saving	Saved in internal memory	
		Capture of one history image to below 20% of the memory capacity used
		20% to below 40% of the memory capacity used
		40% to below 60% of the memory capacity used
		60% to below 80% of the memory capacity used
		More than 80% of the memory capacity used
		Saving disabled

Files saved on the USB memory stick

Captured images will be saved with a file name of MMPJxxxx (with xxxx being from 0001 to 1000) in the folder XXXAVMPJ (with XXX being between 100 and 499) which is located in the "DCIM" folder.
Up to 1,000 images are stored in one folder, and when 1,000 images are exceeded a new folder will be created automatically.

To automatically save a file
When you would like to save images to a new folder before the number of images reaches 1,000, create a folder on the PC with a name to which 1 has been added to the figure XXX of the folder named "XXX AVMPJ" that currently exists in the USB memory.
The captured images that follow will be saved to the folder in the USB memory having the largest XXX figure.
Example: When the current folder is "100AVMPJ", creating "101AVMPJ" will result in the images being saved automatically to the folder "101AVMPJ", which reflects the largest figure.



* When the size of a single stored image is 500 KB, approximately 4,000 images can be stored on a 2 GB USB memory stick. (The size per image will differ depending on the images that have been stored.)
* Our optional USB memory stick is guaranteed to operate. The other USB memory sticks are not guaranteed to operate.
* For safety sake, please make a backup of the USB memory stick that you are using.
* The initialization of the USB memory is performed from the menu screen. (See page E-38)
* The aforementioned operation for the purpose of saving files automatically cannot be performed with the projector. Please perform the operation on the PC.
* Be sure to perform the initialization (formatting) of the USB memory using FAT 32.
* When there are a large number of recorded images, the speed of saving/playback may become slower.

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At time of PC/Video input

Each time the FREEZE/CAPTURE button is pressed, the currently projected image will be frozen (in a fixed display).

NOTE:

- The FREEZE LED is lit green during the still image display.
- If the FREEZE/CAPTURE button is pressed while a moving image is being projected, the zoom magnification and position return to as they were originally.
- A press of the FREEZE/CAPTURE button at the time of still image of OHP will result in a return of the zoom magnification and position to the original condition.
- If the INPUT button on the main unit or the OHP, PC or VIDEO button on the remote control unit is pressed while displaying a still picture, the computer's or video's still picture is canceled and the input changes. In the OHP mode, the still picture remains.
- The operation differs when tandem operation is set to "ON". See page E-43.

Cancelling the Still Image Display

Operation with the Projector
Press the FREEZE OFF button.

Operation with the Remote Control
Press the FREEZE OFF button.

Making presentations using images in the internal memory or an a USB memory stick

Use this function to project images stored in the history with the projector.

Conducting a presentation using USB memory stick images*

* Our optional USB memory stick is guaranteed to operate.
Operation will not be guaranteed with other USB memory sticks.
The processing speed may become slower depending on the type of USB memory stick.

* Captured images are stored in the "AVMPJ" folder located in the "DCIM" folder (XXX is a number between 100 and 499).
Do not store files whose extensions have been changed to ".JPG" or image files of digital cameras generated on devices other than this projector in the XXXAVMPJ folders. Doing so will cause disturbances in images when playing history images or other malfunctions.
Also, if reading has failed or there are corrupt JPG files in the folder, that file position is displayed in gray. If the file is not corrupt, cancel the history playback screen then display it again. The display should return to normal.

1 Prepare the material

Insert a USB memory stick into the projector. Page E-12

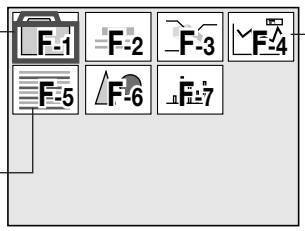
- Using the iP-Viewer tool, images other than those captured with this projector can be converted, and they can be projected with this projector.
  * The iP-Viewer tool can be downloaded free of charge from the Avio website.
  http://www.avio.co.jp/support/mp/index.htm

2 Open the folder list

Press the remote control's THUMBNAIL button.
The FREEZE/CAPTURE LED of the main unit goes on in orange (to indicate the history mode).

- 16 folders can be displayed at once.

Folder cursor (red)



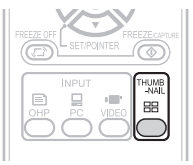
Folder list display

Inside the folder image displayed, the image saved with the unit is contained.

Folder image (thumbnail)
When there is no title file, the images of the first folder will be displayed on a screen of reduced size.
The image files will be among these.
The image file is put in it.

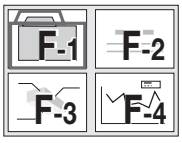
Numbers are for explanatory purposes and actually, numbers 1 to 16 are displayed.

Operation at the main unit
FREEZE/CAPTURE LED (orange)

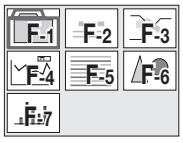


Operation with the Remote Control

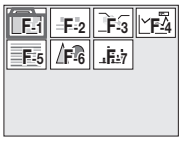
NOTE:
The number of thumbnails displayed can be changed from the menu screen.



(4 thumbnails)



(9 thumbnails)



(16 thumbnails)

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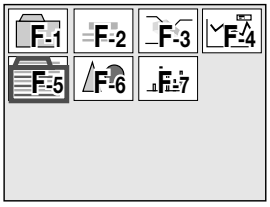
3 Choosing a folder

Press the remote control's scroll ▲▼◀▶ buttons to set the folder cursor to the folder image you want to project.
When the number of the folder images exceeds 16, pressing the scroll button changes over to the other page.

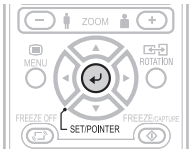
Operation with the Remote Control



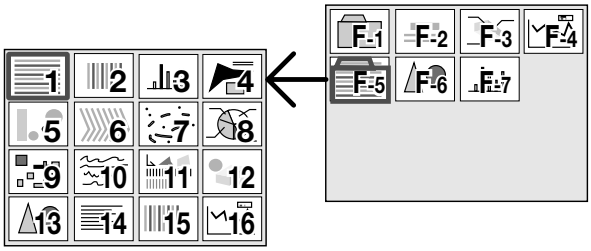
4 Open the file list

Press the remote control's SET/POINTER button to open the file list.

- The image displayed on the folder list is the first one in the file list.



Operation with the Remote Control

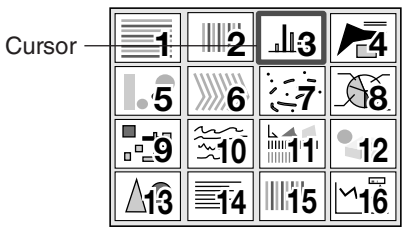


NOTE:
The image that was changed over and saved in the vertical direction is projected vertically even when it is displayed laterally in the reduced-size screen.

5 Choosing a file

Press the remote control's scroll ▲▼◀▶ button and set the cursor to the reduced image you want to project.
When the number of the reduced size screen images exceeds 16, press the scroll ▼ button to display the 17th reduced screen image.

Operation with the Remote Control



NOTE:
The image file that cannot be played back with the unit is not displayed.

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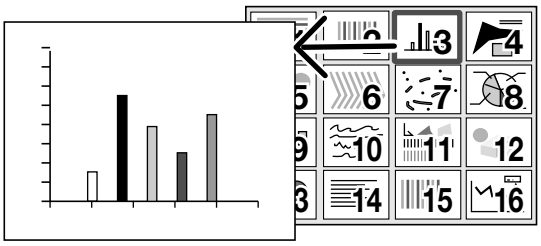
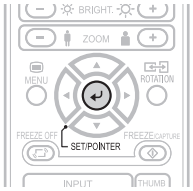
6 Projection on the full screen

Press the SET/POINTER button of the remote control.
The reduced image at the cursor position is projected on the full projection screen of the projector.



When feeding a page, choose the menu “Next.”
The operation can also be changed with the VOLUME + and VOLUME – buttons of the remote control.

* When the zoom is at the minimum, pressing the SCROLL ◀ button permits switching to the image before the displayed image, and pressing the SCROLL ▶ button permits switching to the next image.

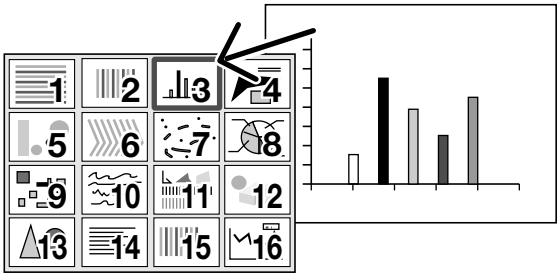


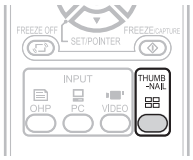
Operation with the Remote Control

Onscreen operation

7 Choosing the other image

Press the remote control THUMBNAIL button and return to the file list display. To choose another image in the folder, press the Scroll ▲▼◀▶ button.
To return to the folder list, press the THUMBNAIL button again.
Start operation with step 3 to choose an intended image.





Operation with the Remote Control

8 Projecting/terminating the OHP image

Press the remote control FREEZE OFF button or OHP button.

See Page E-12 for information about removal of the USB memory stick.

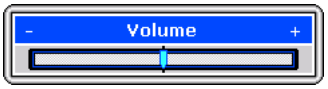
NOTE:
When using the PC to perform operations on the image data on the USB memory stick, handle the data copied from the USB memory stick to prevent it from becoming unreadable on the projector after the operation.

Operation with the Projector
FREEZE/CAPTURE LED (light off)

Operation with the Remote Control

Adjusting the Volume

Effective only During PC and VIDEO Input



Volume adjustment bar

Operation with the Projector
Volume adjustment cannot be made at the operation panel of the projector.

NOTE:
If no operation is performed for several seconds while the volume adjustment bar is displayed, the volume adjustment bar turns off.
The PC and VIDEO volume can be adjusted independently.

Operation with the Remote Control
Adjust using the VOLUME (+/–) buttons.

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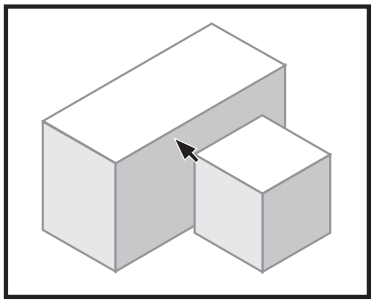
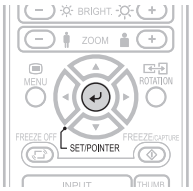
Displaying the Pointer

This operation displays the pointer in the currently projected image.

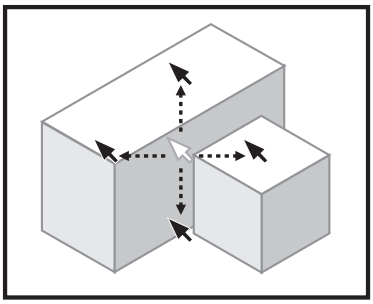


Operation with the Projector
The ability to turn on and turn off the pointer is not available from the operation panel of the projector.

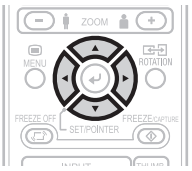


Operation with the Remote Control
Press the SET/POINTER button.
One more press of the SET/POINTER button while the pointer is displayed will turn off the pointer display.

Moving the Pointer



Operation with the Projector
Scrolling is not possible from the main unit's control panel.



Operation with the Remote Control
Press the SCROLL (▲▼◀▶) buttons.

See Page E-38 for information about the form, color, and size of the pointer.

NOTE:
If the brightness or volume is adjusted while the pointer is displayed, the pointer disappears temporarily, but it reappears once the brightness or volume adjustment bar turns off.
Note that the pointer cannot be displayed during still image conditions of the PC/Video mode.

Deleting the Projection Image and Audio

This operation deletes the currently projected image and audio without switching off the lamp.

Operation with the Projector
The ability to delete the projection image is not available from the operation panel of the projector.

Operation with the Remote Control
Press the MUTE button.

NOTE: When a fixed period of time elapses (about 30 minutes) with the video/audio muted, a message will be displayed to check whether to shut down the projector. Selection of "Yes" will set the projector to the standby mode, while a selection of "No" will again delete the video/audio.
When there has been an absence of an operation for 30 seconds during the display of the above confirmation message, the projector automatically enters the standby mode.

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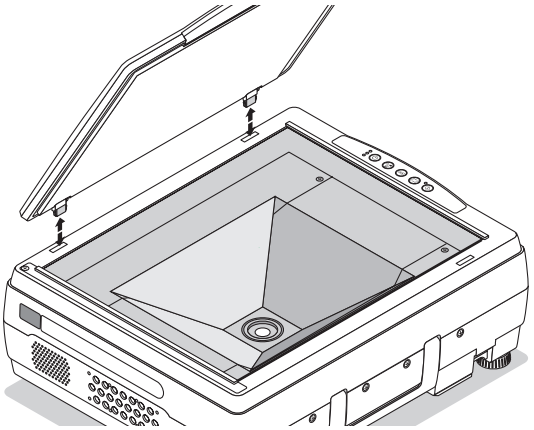
Method of OHP Operation

Attaching the Document Cover

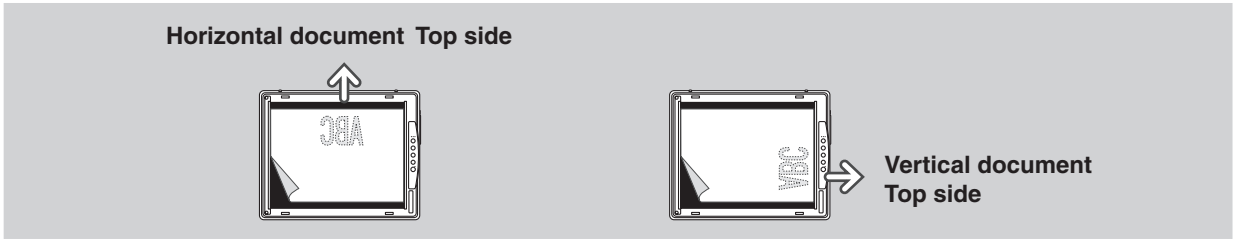
The mounting orientation of the document cover can be changed to the opposite direction in accordance with the circumstances circumstances.



NOTE: When removing the document cover, lift the cover by both hands and remove it.

Preparation of the Projection Document

The document (printed material) that is to be projected is placed on the projector as illustrated in the diagram below and the document cover is closed.



NOTE:

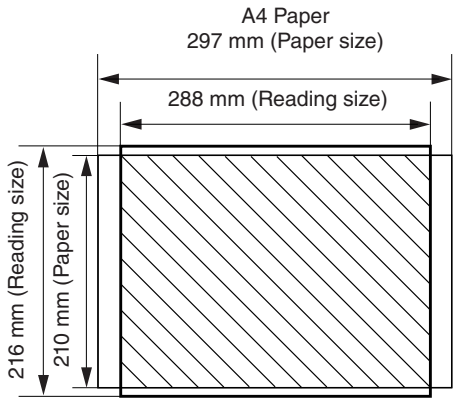
- The document can be projected even when the document cover has not been closed; however, in this instance, unnecessary items may be projected which will make the image difficult to view.
- When shiny paper like magazine covers or black paper is placed on the projector, the internal fluorescent light bulb may be reflected in it, making the edges of the projected document hard to see.

Reading Size of Projection Documents

The maximum reading size of documents and printed material is 216 mm high by 288 mm wide.
Consequently, when A4 paper (210 mm high and 297.5 mm wide) is placed on the projector, reading will be as illustrated in the diagram below (which depicts the area that can be projected as the portion with diagonal lines).

The portion that falls outside of the reading range will not be projected; therefore, shift the paper as required.

* When a heavy photographic object is placed, the reading size may be reduced slightly.



Other functions that are used in the OHP operation can be seen on the following pages:

- Switching the input to OHP → See Page E-25
- Changing the projection image to a still image display → See Page E-28
- Capturing a projection image → See Page E-28
- Viewing captured images → See Page E-29

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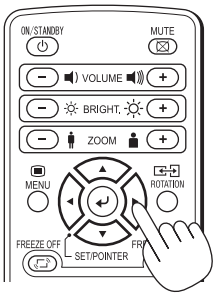
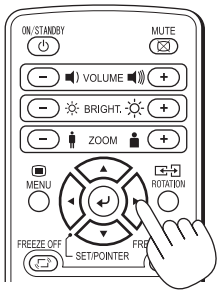
Menu Configuration

The adjustment/setting items and content will differ depending on the input selection and the permitted information will be displayed on the menu for that input mode.

Pointer•Screen  ⇨ **Image adjustment**  ⇨ **Settings**

	Pointer • Screen		Image adjustment	Settings
	Pointer • Screen	History menu		
OHP input	Pointer shape	Back page in history Next page in history (in the single sheet display mode)	Red	Keystone
	Pointer color	Erase entire history	Blue	Language selection
	Pointer size	Erase 1 sheet in history	Color mode	Projection mode
	Mute mode			Economy mode
	Storage image quality			Auto power off
	Angle of rotation selection			Tandem operation
	History image transfer			Lamp usage time
	USB Format			Input signal
PC input (RGB)	Pointer shape		Contrast	Keystone
	Pointer color		Brightness	Language selection
	Pointer size		Red	Projection mode
	Mute mode		Blue	Economy mode
	Computer input		Sharpness	Auto power off
			Aspect Ratio	Tandem operation
			Color mode	Lamp usage time
			Sync adjustment	Input signal
PC input (component)	Pointer shape		Contrast	Keystone
	Pointer color		Brightness	Language selection
	Pointer size		Color	Projection mode
	Mute mode		Hue	Economy mode
	Computer input		Sharpness	Auto power off
			Aspect Ratio	Tandem operation
			Color mode	Lamp usage time
			Sync adjustment	Input signal
VIDEO input	Pointer shape		Contrast	Keystone
	Pointer color		Brightness	Language selection
	Mute mode		Color	Projection mode
	Pointer size		Hue	Economy mode
			Sharpness	Auto power off
			Aspect Ratio	Tandem operation
			Color mode	Lamp usage time
			Video select	Input signal

NOTE:

- The “Image adjustment” and “Settings” menus cannot be performed when the history images are displayed.

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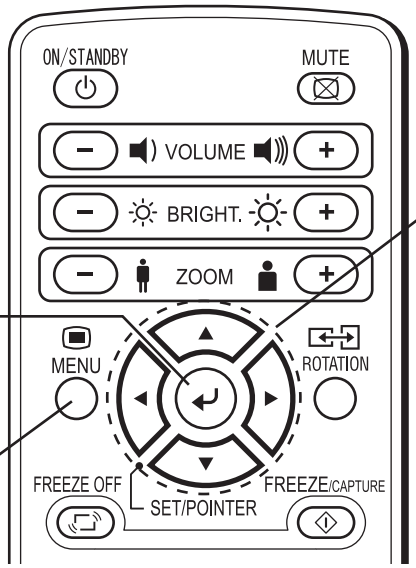
Menu Operation Method

Names and Functions of the Buttons Used in Menu Operation



SCROLL ▲▼◀▶ Buttons
Used in the selection of menu names and item names, and to set and adjust item contents.

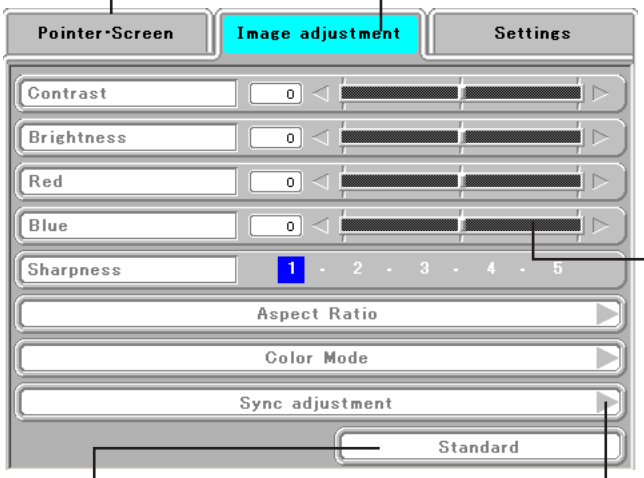
SET/POINTER Button
Used to finalize a setting after making the setting or adjustment.

MENU Button
Used to display a menu and to close a menu.

Names and Functions of the Menu Parts

Menu tab
Switches to the various menus when selected.

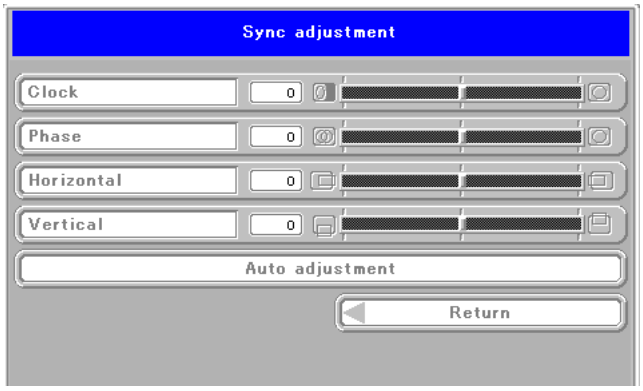
Cursor (Light blue)
Selects the item that you would like to set or adjust.



Adjustment bar
Indicates the adjustment condition according to the increase or decrease of the bar point.

Returns the set or adjusted item to the standard value (shipping default condition of our factory).

Sub menu icon
When an item containing this icon is selected, there is a change to the sub menu.



Returns to the menu that is one layer higher.

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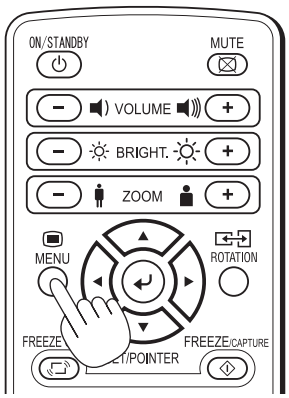
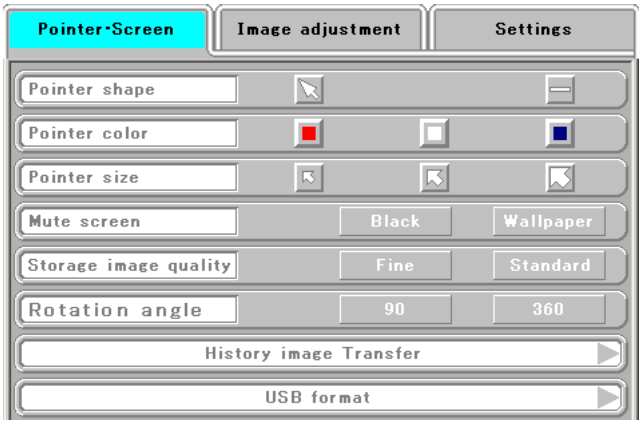
Method of Menu Operation

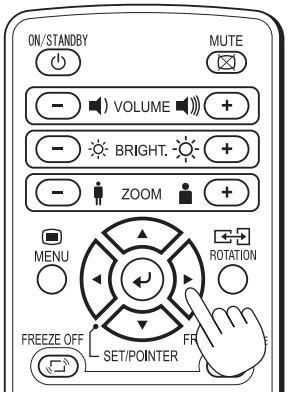
This section describes the actual operation method. Adjustment of [Brightness] using the remote control is provided as an example.

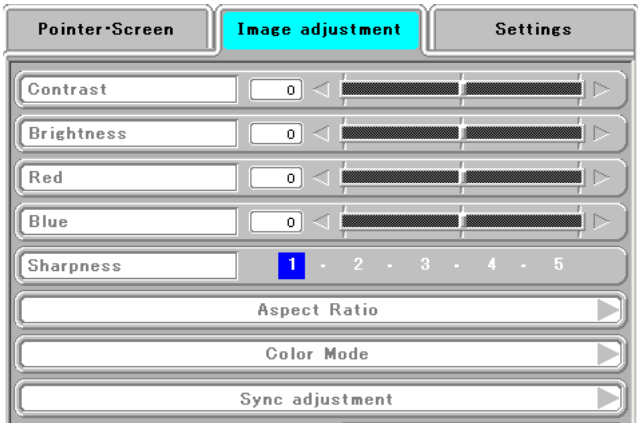
1 Press the MENU button and display the menu





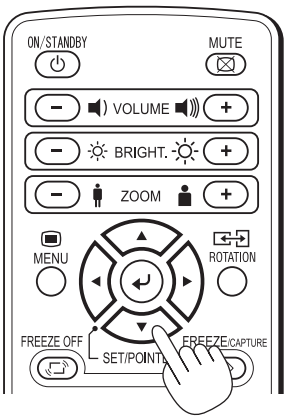
2 Select [Image adjustment] with the SCROLL ◀▶ buttons

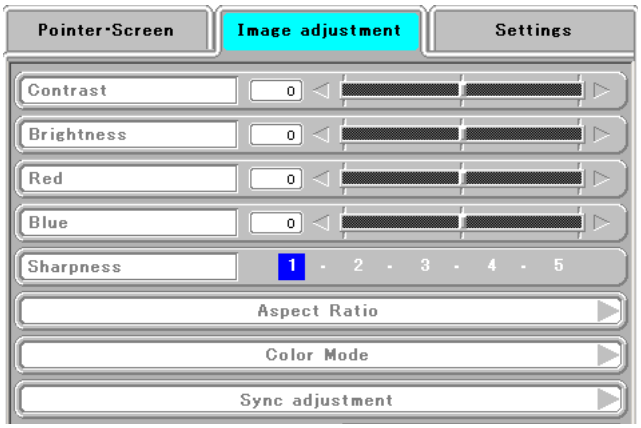




Each press of the SCROLL ▶ button switches the menu one step in the sequence of [Pointer • Screen] → [Image adjustment] → [Settings], and each press of the SCROLL ◀ button causes a return in the opposite direction.

3 Display the detailed menu with the SCROLL ▼ button or the SET/POINTER button, then select [Brightness].





Move the cursor and select [Brightness].

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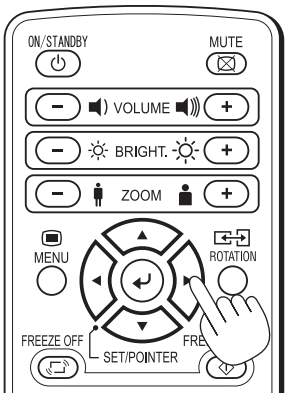
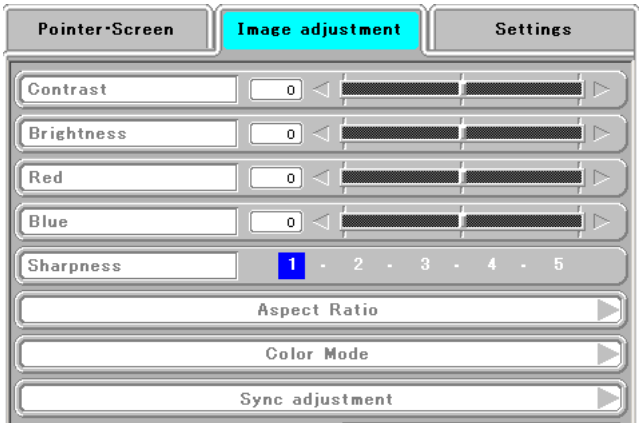
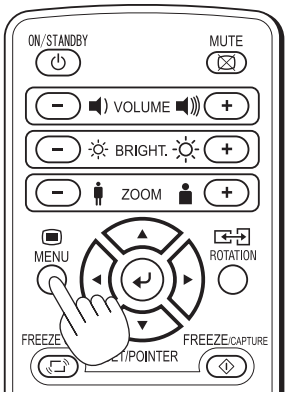
4 Make the adjustment with the SCROLL ◀▶ buttons while checking the projection image





SCROLL ◀ button: Each press causes the numerical value to decrease.
SCROLL ▶ button: Each press causes the numerical value to increase.

5 Press the MENU button and close the menu



This completes the [Brightness] adjustment.

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Menu Description

Pointer • Screen

This selects the shape, color, and size of the pointer.

- Pointer shape ..... Selects the shape of the pointer from 2 types.
- Pointer color ..... Selects the color of the pointer from amongst 3 types (i.e., red, white, and blue).
- Pointer size ..... The size of the pointer can be changed in 3 levels.
- Mute mode ..... Sets the image that will be displayed at the time of screen deletion.
  Black: Displays an entirely black screen.
  Wallpaper: Displays the wallpaper image.

- Storage image quality ..... Select the picture quality for saving OHP documents in the history.
  OHP input only
  Fine: When this is selected, the file size is large and fewer images can be stored, but the picture quality is high.
  Standard: When this is selected, more images can be stored, but the picture quality is not as good.

- Angle of rotation selection
  ..... This allows you to set the angle at which the OHP image rotates when the vertical/horizontal key on the main unit is pressed.
  90: (0° ←→ 90°)
  360: (0° → 90° → 180° → 360°)

- History image transfer ..... This is a function for transferring images stored in the internal memory to the inserted USB memory stick.

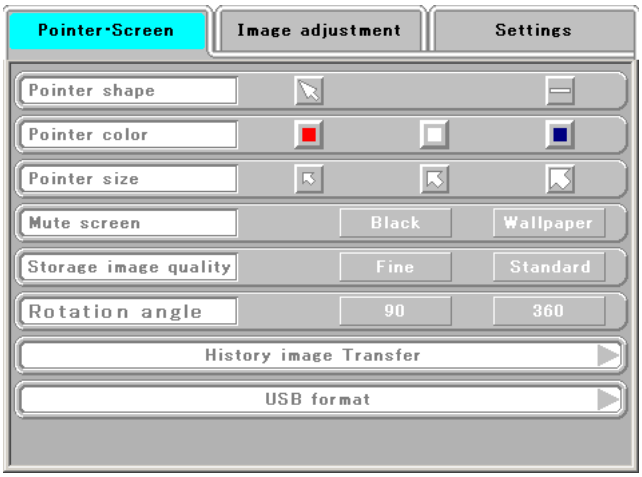
* When no USB memory stick is inserted, images are stored in the projector. Note that once the power is turned off, any images stored in the internal memory at that time are deleted.

- USB Format..... All of the data in the USB memory stick will be deleted.
  OHP input only

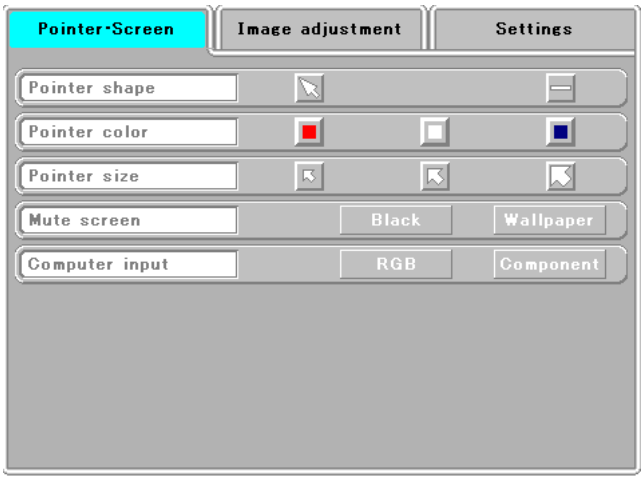
- Computer input..... Select the input signal (RGB or component video).
  PC input only
  RGB: Use this to project images on a computer.
  Component*: Use this to project D1 to D4 video images.

* An optional D terminal/RGB conversion cable is required.
* If Component is selected, connect the video's audio to the video audio input terminal.
* When a component is chosen, do not enter the RGB signal (PC video). It is not displayed normally.

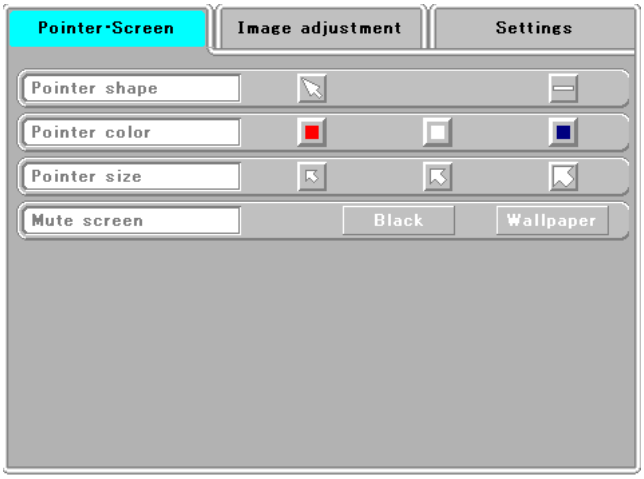
During OHP input



During PC/Component video input



During Video input



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History menu

OHP input only

● No. sheets on thumbnail display
.....Select the number of thumbnail images to be displayed simultaneously on one screen.
4 sheets: Four thumbnail images are displayed at once.
9 sheets: Nine thumbnail images are displayed at once.
16 sheets: 16 thumbnail images are displayed at once.

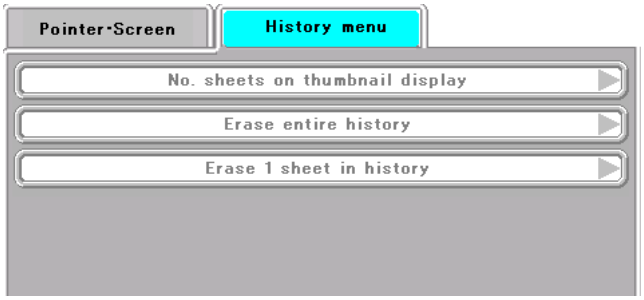
● Erase entire history .....A confirmation message appears. Select "Erase all", then press the set/pointer button to delete all the OHP history images stored in the internal memory.
When using the SD memory card, all the data in the folder where currently displayed files are saved is erased.

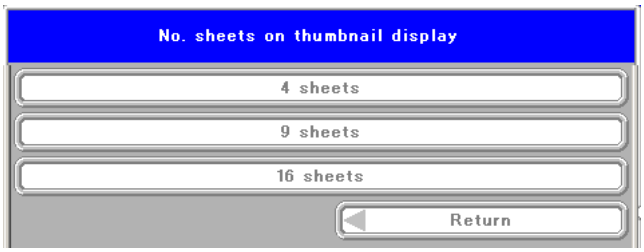
● Erase 1 sheet in history...The currently displayed history image is deleted and the next history image is displayed.

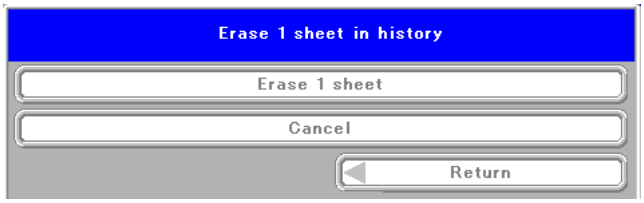
When a single image selected from the list of OHP history images is displayed, the following item is also displayed.

● Back page in history Next page in history
.....Set the cursor then use the ◀ button on the remote control unit to select "Previous history image", the ▶ button to select "Next history image".
Back page in history: The projector switches to the history image stored in the memory before the currently projected history image.
Next page in history: The projector switches to the history image stored in the memory after the currently projected history image.

When a list of history images is displayed







When a single history image is displayed

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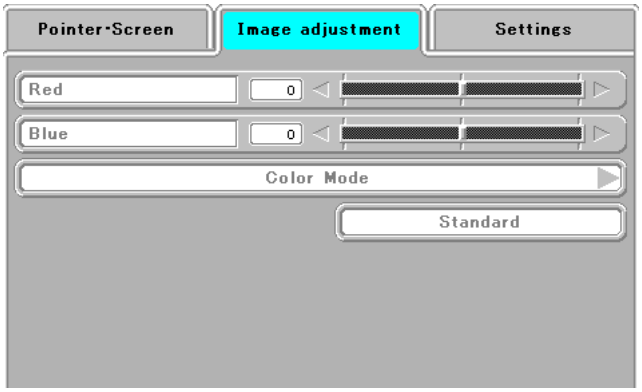
Image adjustment

This performs the settings and adjustments related to the projected image.

During OHP input



When OHP input has been selected.

● Red (Red color adjustment)
.....Adjusts the deepness of the red color in the range of –50 to 50.

● Blue (Blue color adjustment)
.....Adjusts the deepness of the blue color in the range of –50 to 50.

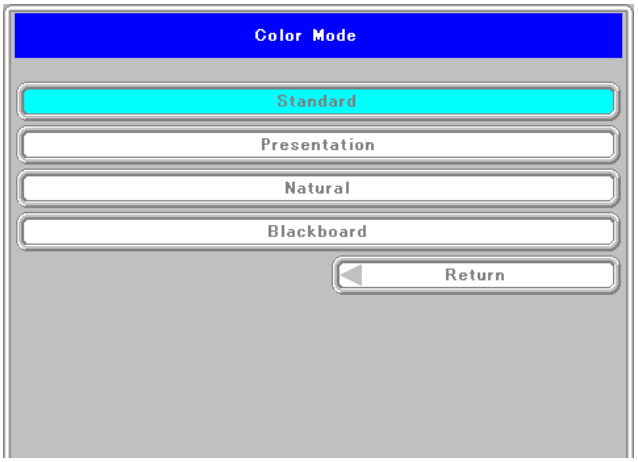
Sub menu: Color mode

● Standard ( ) .....The contrast is strong and the image is crisp.

● Presentation ( ).....Displayed in a color suitable for presentation (PC projection).

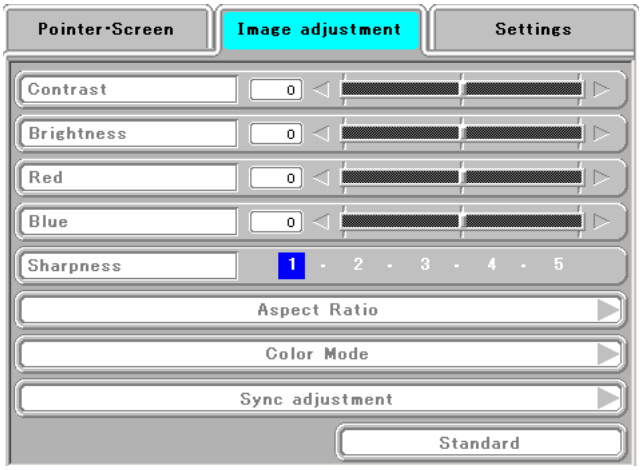
● Natural ( ) .....The images are projected with colors near those of the original image.

● Blackboard ( ).....Use this when projecting images on a blackboard.



When PC input (RGB) has been selected

When the input is set to PC (RGB selected)



● Contrast.....Adjusts the contrast of the projected image in the range of –50 to 50.

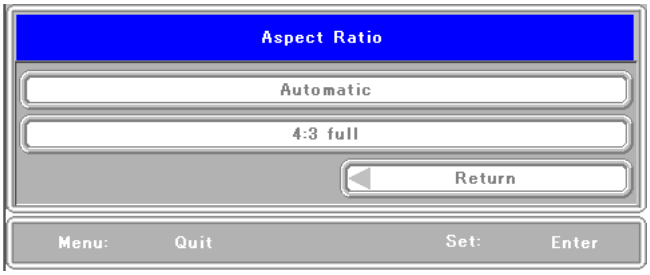
● Brightness .....Adjusts the brightness of the projected image in the range of –50 to 50.

● Red (Red color adjustment)
.....Adjusts the deepness of the red color in the range of –50 to 50.

● Blue (Blue color adjustment)
.....Adjusts the deepness of the blue color in the range of –50 to 50.

● Sharpness .....Selects the sharpness of the projected image from amongst 5 levels. As the numerical value increases, the sharpness of the image is enhanced.

● Aspect Ratio .....Switches the aspect ratio of the projected image to 4:3 or 16:9. When automatic detection has been selected, the aspect ratio will be switched in accordance with the input.



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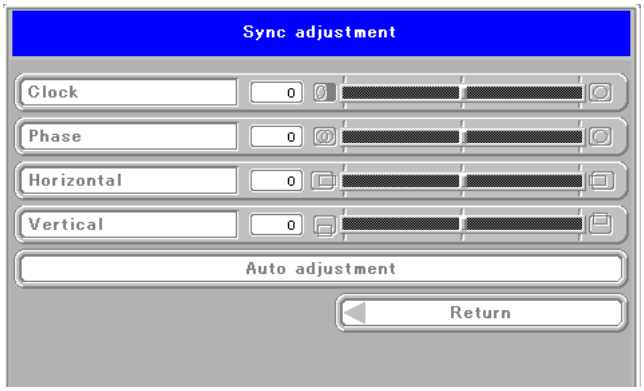
Sub menu: Sync adjustment

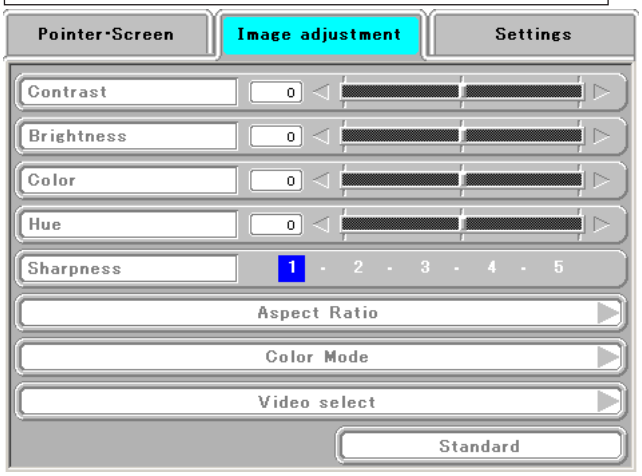


- Clock ..... Adjusts the horizontal size of the projected image in the range of –50 to 50.
- Phase ..... Adjusts the noise/flickering of the projected image in the range of –50 to 50.
- Horizontal ..... Adjusts the horizontal position of the projected image in the range of –50 to 50.
- Vertical..... Adjusts the vertical position of the projected image in the range of –50 to 50.
- Auto adjustment..... Performs sync adjustment automatically.

NOTE:
Depending on the PC input signal, there might not be a change as far as from –50 to 50.

When the PC (component) input or the VIDEO input is selected

When the input is set to PC (component selected)

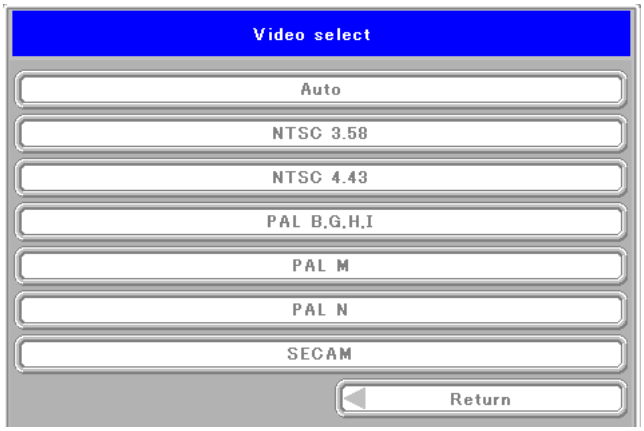


- Contrast..... Adjusts the contrast of the projected image in the range of –50 to 50.
- Brightness ..... Adjusts the brightness of the projected image in the range of –50 to 50.
- Color..... Adjusts the deepness of the color in the range of –50 to 50.
- Hue..... Adjusts the hue in the range of –50 to 50. As the numerical value becomes lower, the color becomes greenish and as the numerical value increases, the color becomes reddish.
- Sharpness ..... Selects the sharpness of the projected image from amongst 5 levels. As the numerical value increases, the sharpness of the image is enhanced.
- Aspect Ratio ..... Switches the aspect ratio of the projected image to 4:3 or 16:9. When automatic detection has been selected, the aspect ratio will be switched in accordance with the input.

Sub menu: Video Select (only valid when the input is set to VIDEO)

This selects the input signal system.

Auto (detects the signal system automatically) / NTSC 3.58 / NTSC 4.43 / SECAM / PAL B, G, H, I / PAL M / PAL N



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Settings

This performs settings related to the projector unit or while the projector is in use.

● Lamp usage time.....Displays the usage time of the lamp.

“Replacement of the Lamp Unit” → See Page E-46

● Input signal.....The name of the currently selected input is displayed.

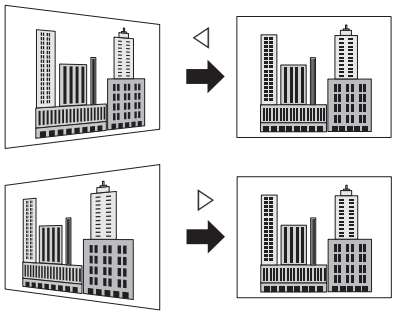
Setting Items

● Keystone.....Performs keystone correction of the projection image.

[Horizontal keystone]

When the ◁ button is pressed, the left side of the image becomes narrower.

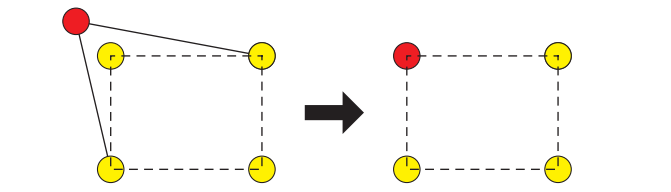
When the ▷ button is pressed, the right side of the image becomes narrower.



If you feel that the rectangular correction of image is not proper after using the horizontal keystone correction function, select [4-point correction].

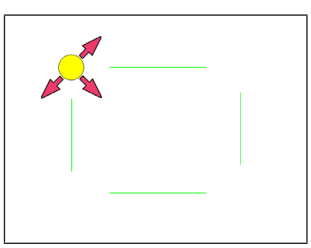
[4-point correction] button

This function lets you move the individual vertices of the projected image using the direction keys on the remote control.

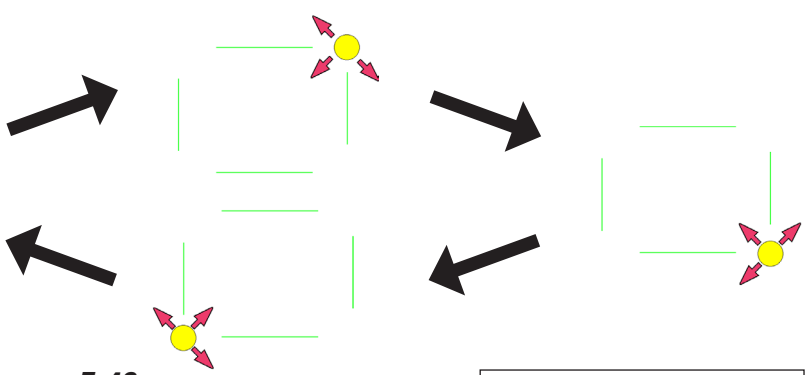


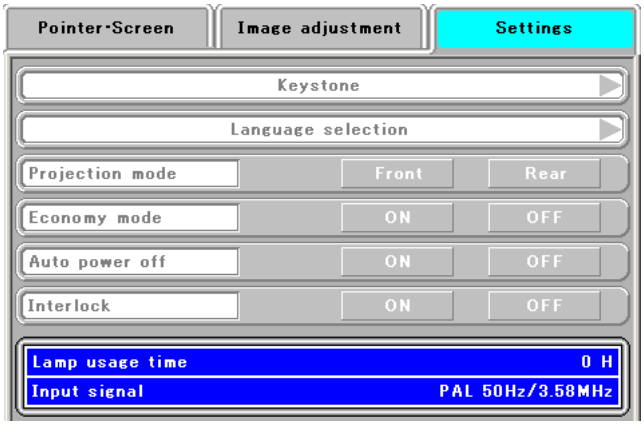
How it works

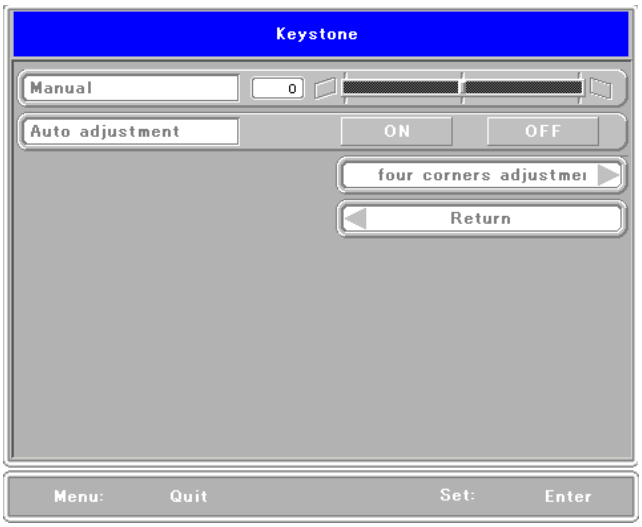
When [4-point correction] is selected, the screen shown on the diagram below appears.
Press the remote control’s set key to select the vertex to be corrected.
Once the vertex to be corrected is selected, use the remote control’s direction keys to adjust the correction.



[4-point correction] mode







* Always use with [Auto Vertical Keystone] set to “ON”.
This function automatically detects the projector’s angle and conducts trapezoidal (keystone) correction within a ±15° angle range.
After automatic adjustment is performed once, correction is conducted automatically if the angle is changed by over about 3° or the projector is restarted.

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Continued on the next page

NOTE:

- When keystone correction has been applied, the resolution at the screen edges will degrade and small characters and the like will become difficult to see. When you do not wish to have the resolution degradation, set the projector on a level platform and set the numerical value of the Keystone menu to "0" (no correction).
- Compared to when keystone correction is not applied, the application of keystone correction results in a display image (of characters, etc.) that appears somewhat blurred and this is related to the image processing that is performed.
- The maximum application of keystone correction when a resolution less than VGA resolution (of 640 × 480 dots) is displayed might result in the disappearance of a portion of the image. Please see Page E-19 for details.
- The keystone correction adjustment range will differ depending on the video signal system.
- When the keystone adjustment is performed manually while the automatic adjustment is set to "ON", the adjustment made manually is effective, but the automatic adjustment setting remains "ON".
  If the projector is strongly tilted after the adjustment is made manually and the projector is restarted, the adjustment that was made manually is invalidated and the automatic adjustment function becomes effective. If you wish to keep the adjustment made manually, set the automatic adjustment to "OFF" after making the manual adjustment.

● Language selection ..... Selects from among the following languages the language for use in the menus and message indications: Japanese, English, German, French, Spanish, Italian, Chinese, and Korean.

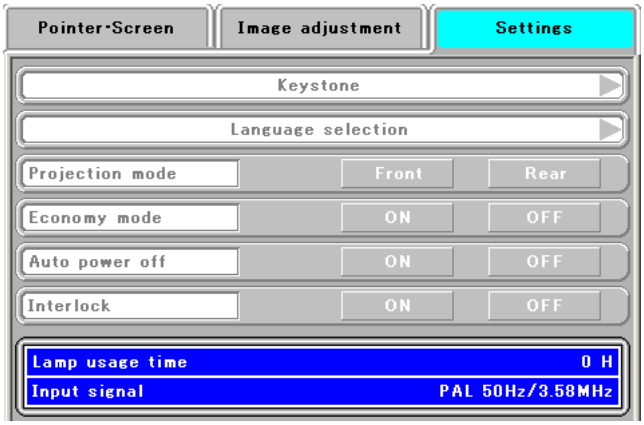
● Projection mode..... Selects the projection system of the projector from between Front (front projection) and Rear (rear projection).

● Economy mode ..... **ON (Economy mode):**
The brightness of the lamp will be approximately 80%. The lamp service life will be extended.
OFF (High brightness mode):
The brightness of the lamp will be 100%. There will be a bright screen.

● Auto power off..... When this is set to "ON", the lamp turns off if the projector is in the "No Sync" mode for 15 minutes when the input is set to PC/component video or VIDEO.

● Tandem operation..... When "ON" is selected, operation is as described below.

1. When the FREEZE/CAPTURE button is pressed while the OHP/VIDEO image is being projected, the OHP image is captured and the image automatically switches to the PC display.
2. When the FREEZE/CAPTURE button is pressed while the PC display is being projected, the OHP image is captured.



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Maintenance

Fault Protection

The projector is equipped with a built-in protection circuit to prevent fire and breakdown due to faults.

When the LAMP/COVER LED lights in red

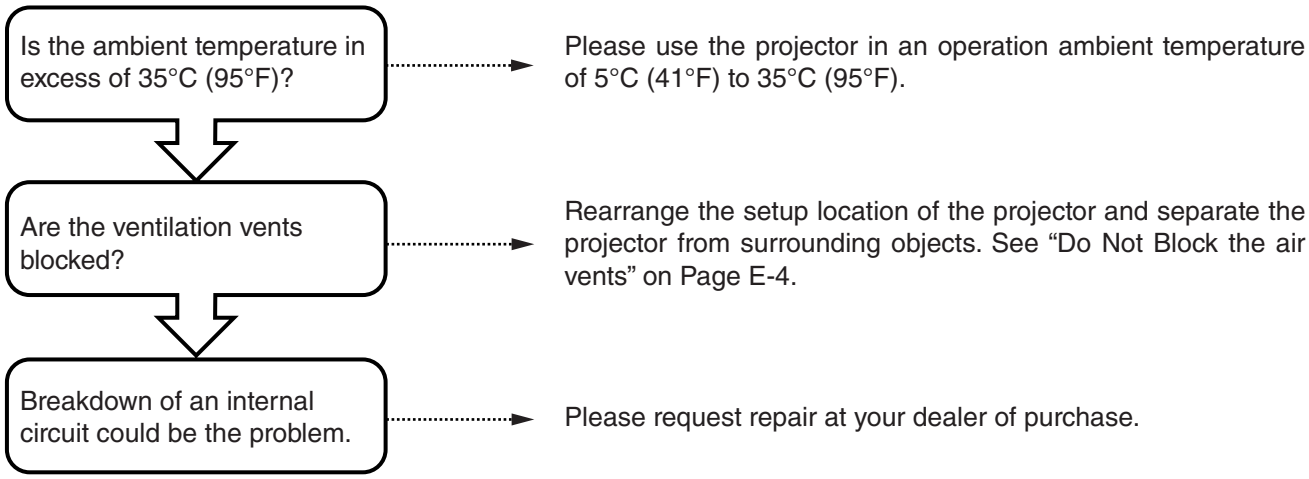
○ **Measures to be taken**

1. Disconnect the power plug from the outlet.
2. Properly install the lamp unit cover. See “Replacement of the Lamp Unit” on Page E-46.

When the TEMP LED flashes or lights steadily

○ **Measures to be taken**

1. Disconnect the power plug from the outlet.
2. Check the following matters and perform the countermeasure properly.


Is the ambient temperature in excess of 35°C (95°F)?
Please use the projector in an operation ambient temperature of 5°C (41°F) to 35°C (95°F).
Are the ventilation vents blocked?
Rearrange the setup location of the projector and separate the projector from surrounding objects. See “Do Not Block the air vents” on Page E-4.
Breakdown of an internal circuit could be the problem.
Please request repair at your dealer of purchase.

* The projector is running properly when the TEMP LED turn off.

* When the LAMP/COVER LED is lit red at the same time, please replace the lamp. See Page E-46 for information about the replacement method.

* The flashing of the TEMP LED is a warning of a high temperature.
When the usage circumstances have not changed after 10 seconds have elapsed since the start of the flashing, the TEMP LED changes to be lit steady and the lamp goes off.

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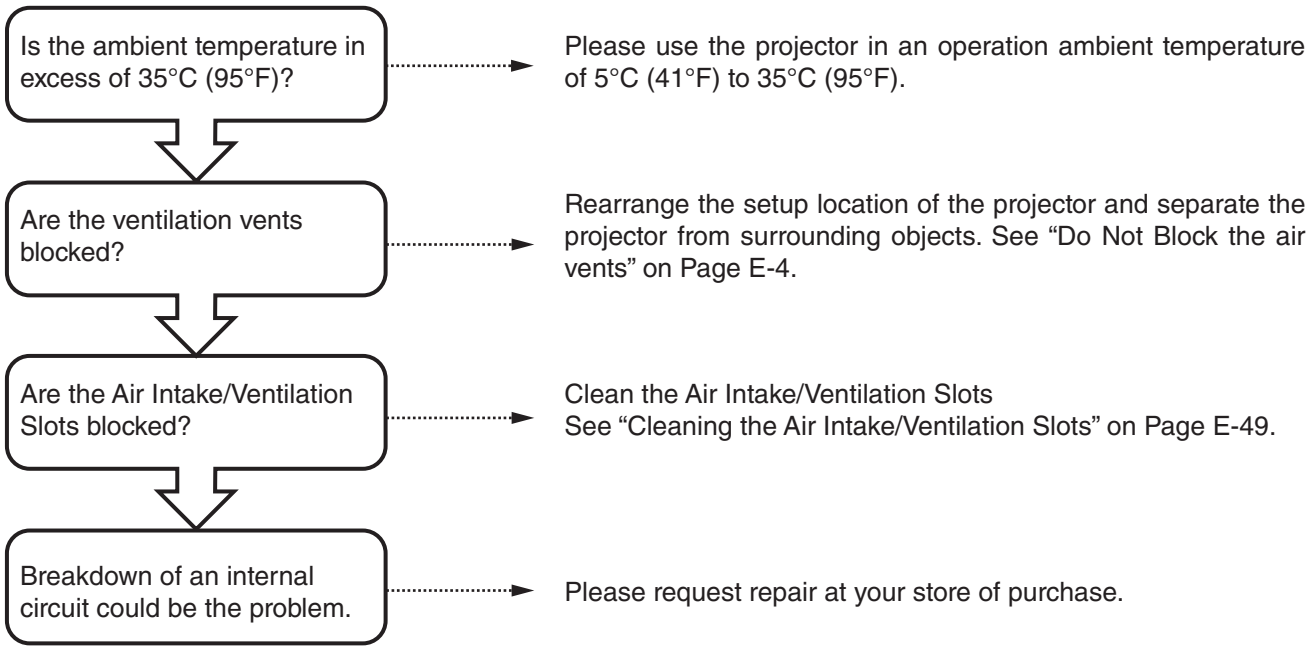
When the power has failed (When all the LED go off with the power ON)

○ **Measures to be taken**

1. Disconnect the power plug from the outlet.
2. Check the following matters and perform the countermeasure properly.


Is the ambient temperature in excess of 35°C (95°F)?
Please use the projector in an operation ambient temperature of 5°C (41°F) to 35°C (95°F).
Are the ventilation vents blocked?
Rearrange the setup location of the projector and separate the projector from surrounding objects. See “Do Not Block the air vents” on Page E-4.
Are the Air Intake/Ventilation Slots blocked?
Clean the Air Intake/Ventilation Slots
See “Cleaning the Air Intake/Ventilation Slots” on Page E-49.
Breakdown of an internal circuit could be the problem.
Please request repair at your store of purchase.

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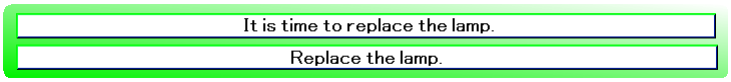
Replacement of the Lamp Unit

The projection lamp used on this projector should be replaced after about the number of hours indicated below (or sooner, depending on the usage conditions).
When the usage time exceeds 2000 hours*, the possibility for explosion increases, so the lamp is forcibly shut off.

When the usage time exceeds 1900 hou rs, replace the lamp unit (sold separately) before the usage time reaches 2000 hours. Also, if the picture is dark, the lamp has reached the end of its service life. Replace it with a new lamp unit.

When the lamp usage time reaches 1900 hours

• Message projected by the projector
This is displayed when the lamp usage time exceeds 1900 hours.

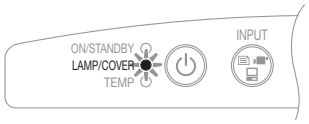


• Main unit control panel
The lamp/cover LED flashes red.
The lamp usage time can be checked at the “Installation settings” menu.

When the lamp usage time exceeds 2000 hours

• Message projected by the projector
The lamp does not light and nothing can be projected.

• Main unit control panel
The lamp/cover LED lights red.



* The “Lamp usage time” that is displayed on the menu screen displays the usage time when the Eco mode is both ON and OFF as a value converted to usage time when the Eco mode is OFF.
It is for this reason that when the projector has been used with the Eco mode always ON, the lamp replacement time guideline will be at a lamp usage time of 1900 to 2000 hours on the menu screen, although the guideline for lamp replacement is 2900 to 3000 hours in terms of the actual usage time.

⚠ WARNING	• Do not replace the lamp unit immediately after using the projector. The lamp is high temperature and you could get burned. Disconnect the power plug from the outlet and wait one hour or longer before replacing the lamp. • Do not touch the glass portion of the lamp unit with your hands. Doing so could lower the brightness and shorten the life of the lamp. • There is a large number of glass parts such as the lamp and mirrors that are used inside the projector. If a glass part breaks, please exercise due caution in handling so that you are not injured by fragments. Please request repair from the store of purchase.

⚠ CAUTION	• Please specify the dedicated lamp unit. iP-02 (Model: IPLK-J1)

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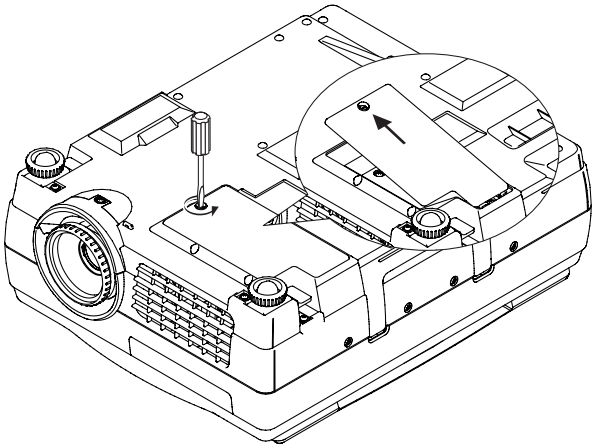
Lamp Unit Replacement Procedure

To prevent burns, wait one hour or longer after the lamp has been switched off before performing the following procedure.

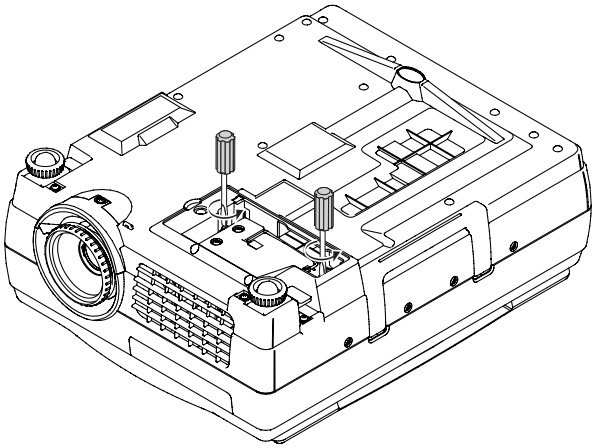
1 Remove the lamp unit cover

Using a flat-head screwdriver, loosen the lamp unit cover's screw and pull the cover in the direction of the arrow to remove it.



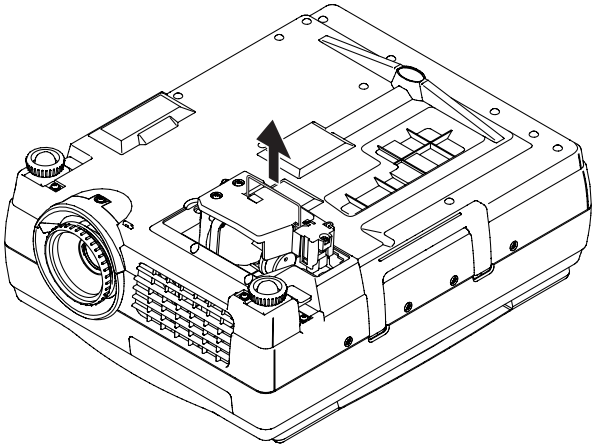
2 Loosen the mounting screws of the lamp unit

Using a minus screwdriver, loosen the 2 screws of the lamp unit.



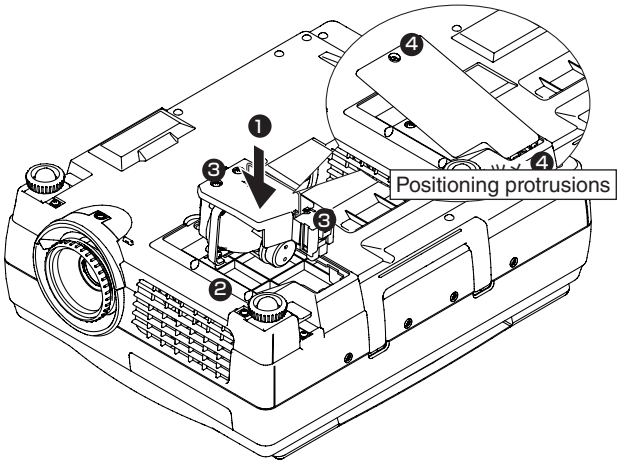
3 Pull out the lamp unit

Hold the handle of the lamp unit and pull it up and out.



4 Install a new lamp unit

❶ Take the lamp unit and press it into the projector.
❷ Check that the two positioning prongs on the bottom of the lamp unit are securely fit into the two holes.
❸ Tighten the 2 mounting screws of the lamp unit.
❹ Align the 2 tabs located on the lamp unit cover with the projector and attach from the side of the tabs. Tighten the mounting screws of the lamp unit cover.



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5 Reset the lamp usage time

Please perform the operation indicated below in the **standby mode** (*).

Operation with the Projector

Press the INPUT, PORTRAIT, FREEZE OFF and FREEZE/CAPTURE buttons simultaneously, then press the input selector and still picture buttons simultaneously.

Operation with the Remote Control

Resetting of the lamp usage time cannot be performed with the remote control.

The LAMP/COVER LED will flash green following this and projection will start.

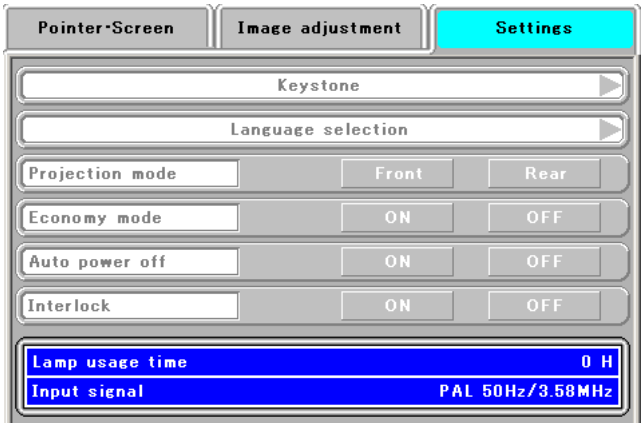
* The power plug is plugged into a power outlet and only the ON/STANDBY LED is lit red.

⚠ **CAUTION**	• Do not reset the lamp usage time without replacing the lamp. The likelihood of the lamp rupturing becomes higher when the lamp has been used in excess of 2000 hours.

6 Check that the indication of the lamp usage time has become “0 H” as illustrated in the diagram to the right.

If the usage time has not been reset, please reset it by following Step **5** again.

Check the lamp usage time by pressing the menu button of the remote control to display the menu, then use the scroll ◀▶ button to display the setup setting.



⚠ **CAUTION**	• If the lamp is used without resetting the usage time, the correct lamp usage time will not be known; therefore, be sure to reset the usage time after lamp replacement. When the indication exceeds 2000 hours, the projector will be forced to turn off the projection lamp.

NOTE:

- In the interest of safety, the lamp will not light when the lamp unit cover is off.
- Like fluorescent bulbs for home use, the lamp unit contains a trace amount of mercury. When disposing of it, do so following the same regulations in place in your community as for fluorescent bulbs.

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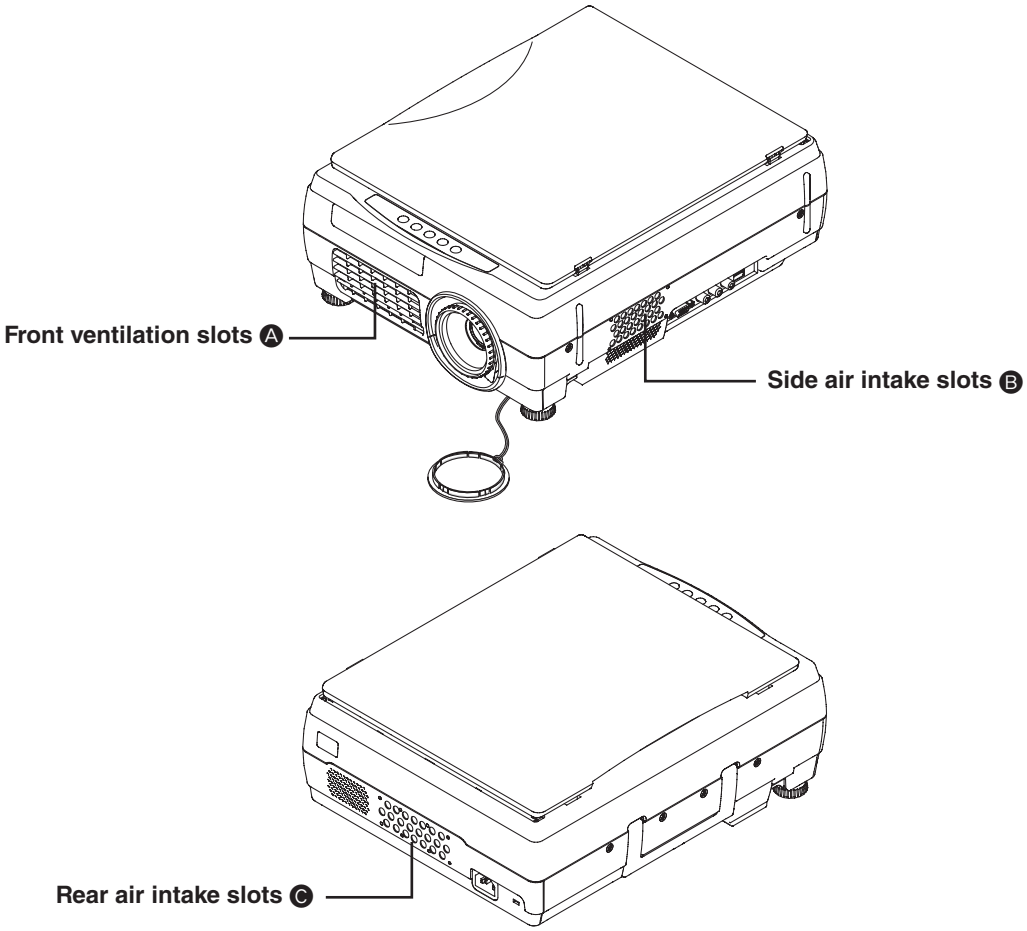
Cleaning the Air Intake/Ventilation Slots

The air intake/ventilation slots serve as the way in and out for the air that cools the internal heat of the projector. Depending on the flow of the air, dust may collect while you are using the projector. When dust collects, the internal temperature will rise and the rotation of the fan will also increase which will cause a drop in the life of the product or breakdown; therefore, please clean the projector regularly (on the order of once every month based on 4 hours of use per day).

Location and Cleaning Method of the Air Intake/Ventilation Slots

Clean the three locations described below with a vacuum cleaner.



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Troubleshooting

When you think the projector may be out of order, please first check the following matters before requesting repair.

Symptom	Please check this	Reference page
Power does not come on	• Is the power cable connected?	E-23
Projection lamp does not light	• Is the lamp unit cover installed? • Is the internal temperature high? If so, the lamp will not light to protect the projector from damage. • Is the lamp usage time in excess of 2000 hours?	E-47 E-44 E-48
There is no image	• Has the connected input been selected? • Is the cable of the connected equipment properly connected? • Have “Brightness” and “Contrast” of the “Image adjustment” menu been set all the way to the minus side? • Have you checked the functions of the personal computer?	E-25 E-18, 22 E-40 E-20
Image is distorted	• Is the projector set up properly? • Has keystone correction been applied?	E-16 E-42
Image is blurred	• Has the focus been adjusted? • Is the projection distance within the range that can be properly focused? • Has keystone correction been applied? • Is the lens cap attached?	E-24 E-17 E-42 E-10
The image flickers	• Please adjust “Phase” of the “Sync adjustment” menu.	E-40
The image is out of adjustment	• Are the settings of the “Sync adjustment” menu suitable?	E-40
The image wavers	• Depending on where people are standing and the installation environment (near a wall, air-conditioner, etc.), the hot air expelled from the front of the projector may generate heat waves which make the image flicker.	–
If the image does not move	• Unplug the power cord, wait 2 or 3 seconds, then plug the power cord back in.	–
The color is not right	• Please adjust “Phase” of the “Sync adjustment” menu.	E-40
There is no sound	• Is the volume adjustment set to the minimum?	E-31
There is a snap sound from the cabinet	• This sound is associated with the minute expansion or shrinkage of the cabinet due to a change of the temperature. It has no effect on performance or anything else.	–
The remote control will not work	• Is the battery exhausted? Or is it weak? • Is the remote control IR sensor exposed to illumination or other light? • Is the remote control IR sensor blocked? • Is an inverter device located close by?	E-4, 15 E-15 E-15 E-15
At the time of personal computer input selection, the position of the video is shifted, or the display is compressed	• Please adjust using the “Sync adjustment” menu.	E-40
“USB memory is not formatted.” is displayed.	• Unplug the USB memory stick temporarily, then try reinserting it 2 or 3 seconds later. If there is no improvement, use the PC to perform formatting in the FAT 32 format. After this, try reinserting the USB memory stick again.	E-38 E-12
The USB memory stick cannot be accessed normally	• Is the USB memory stick broken? Check whether the USB memory stick can be used with another device. (This does not guaranty the operation of all USB memory sticks.)	–
The TEMP LED lights	• Follow the instructions on the “Fault Protection” measures page.	E-44
The LAMP/COVER LED lights in red	• Is the lamp unit cover disengaged? • Is the lamp usage time in excess of 2000 hours?	E-47 E-48
The LAMP/COVER LED lights in orange	• There is a problem inside the projector. Please contact the dealer. • Since an abnormality is found in the internal part, request repair.	E-51
The data stored on the USB memory stick cannot be viewed	• Unplug the USB memory stick temporarily, then try reinserting it 2 or 3 seconds later. If there is no improvement, please check the USB memory stick.	–
The remote control or the main unit’s key panel does not operate.	• Unplug the power cord, wait 2 or 3 seconds, then plug the power cord back in.	–

NOTE:
For the additional information, visit our web site (http://www.avio.co.jp)

LED List

LED State			Significance	
ON/STANDBY	LAMP/COVER	TEMP		
Off	Off	Off	AC power OFF	Normal condition
Red	Off	Off	Standby	
Green	Flashing green	Off	Standby to start of projection	
			End of projection to standby	
Green	Green	Off	Projecting	
Red	Red	Off	Lamp cover open	Power has been switched OFF because of the alarm
			Lamp burned out	
Red	Flashing red	Off	Lamp usage exceeds 2,000 hours	
Red	Orange	Off	Internal problem	
Red	Off	Red	Temperature fault	
			Fan fault	
Green	Flashing red	Off	Lamp usage exceeds 1,900 hours	Alarm sounding
Green	Green	Flashing red	Abnormal temperature warning	

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Repair Service

Repair Service Procedure

- During the warranty period, we will repair the product in accordance with the warranty regulations. Please request service at your store of purchase.
  Please submit the written warranty at the time of your request.
- Please contact your store of purchase for repairs that follow the elapsed warranty period.
  When repair work enables the maintenance of product functions, charges will apply. for the repairs.
- Before asking for repair service, check the Troubleshooting section on page E-50 once more. If this check confirms a problem, contact the dealer where you bought the product.
- When asking for repair service, provide your dealer with the following information:
  Description of the problem (as many details as possible)
  Date of purchase
  Your Name
  Your Address
  Telephone number
  Product name and model No.

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Specifications

Model Name		IP-02UE
Projection System		DLP®
Aspect Ratio		Native 4:3 (Automatically selected)
Number of pixels		786,432 pixels (1,024 × 768 dots)
Zoom Ratio		Manual Zoom, 1.16:1
Lamp Type		260 W Super-High-Pressure Mercury Lamp
Image Size (Diagonal)		33"–300"
Throw Ratio		1.8–2.1 (60" @ 2.2m)
Display Color		Full 16.77 million color palette
Brightness		3000 ANSI lumens
Contrast Ratio		2400:1
Horizontal Frequency		24.8–91.1 kHz
Vertical Scan Rate		50–85 Hz
Resolution Support		VGA (640 × 480) to UXGA (1600 × 1200)
OHP Input/Output	Scanning Camera	3.15 Mega-pixels color CMOS camera
	Total number of pixels	2,048 × 1,536 pixels
	Max Scanning Size	288 mm × 216 mm (11.3 in × 8.5 in)
	Scanner output (For USB memory)	JPEG (2,048 × 1,536 dots)
Input terminal (image)	PC input	Computer in (D-sub 15 pin) × 1 (Share with Component*1)
	Video input	Composite Video in (RCA) × 1
	Audio input	Audio L/R in (RCA) × 1
	Memory I/F	USB-A*2 × 1 (USB 2.0)
Audio Output		Speaker 5 W mono
Video Compatibility		NTSC, PAL, SECAM
HDTV Compatibility		480i, 480p, 720p, 1080i
Keystone Adjustment		Vertical: Auto ±15°, Manual ±40°
		Horizontal: Manual ±40°
Power Supply		AC 100 to 240 V, 50/60 Hz
Power Consumption		370 W (Typical), Standby 0.3 W
Dimensions (W × H × D)		290 (W) × 365 (D) × 140 (H) (not including protrusions)
Weight		4.7 kg (approx. 10.3 lbs)
Accessories (Standard)		Power Cord (by region)
		VGA (D-sub 15 pin) Cable
		USB Memory Stick
		Remote Control w/ Battery
		User's Manual
Accessories (Optional)		Spare Lamp Kit: IPLK-J1
		Carry Bag: MPSC-50R

*1 D terminal/RGB conversion cable is required for input of D1–D4 images

*2 Avio optional USB memory sticks are guaranteed to operate. Other USB memory devices may not operate.
Initial formatting of the USB memory using FAT 32 is required. Large number of recorded may delay the speed of saving/playback.

RoHS Compliant

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To customers: Enter the name and date of the store where you purchased this product. This information will be useful when you ask your dealer for repair.

• Date of Purchase (year, month, day)
• Store of Purchase Telephone Number : ( )

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